Cover Page for ERIC submission

Title: Cognitive Information Processing: Career Theory, Research, and Practice

By: James P. Sampson, Janet G. Lenz, Emily Bullock-Yowell, Debra S. Osborn, Seth C. W. Hayden (Eds.)

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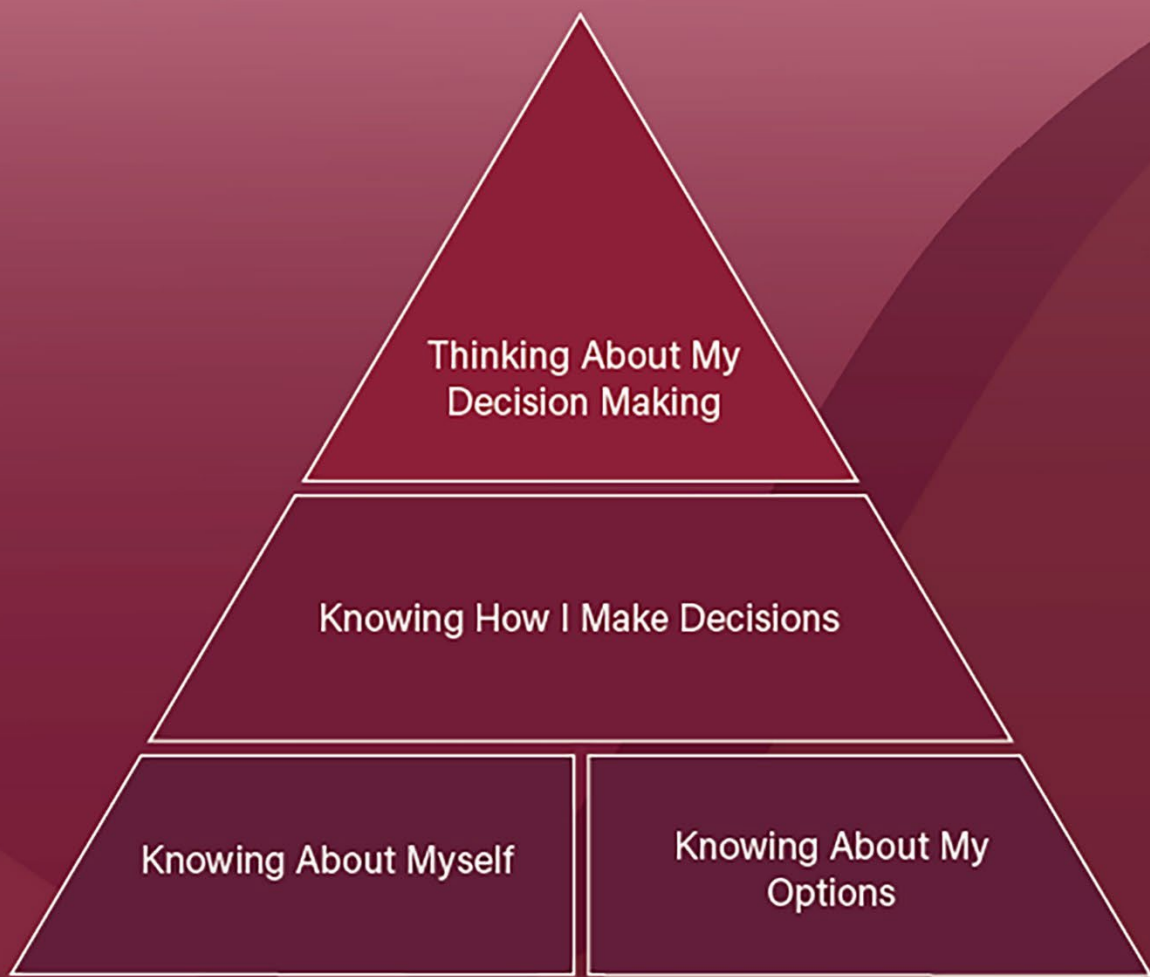23. Erica Stallings
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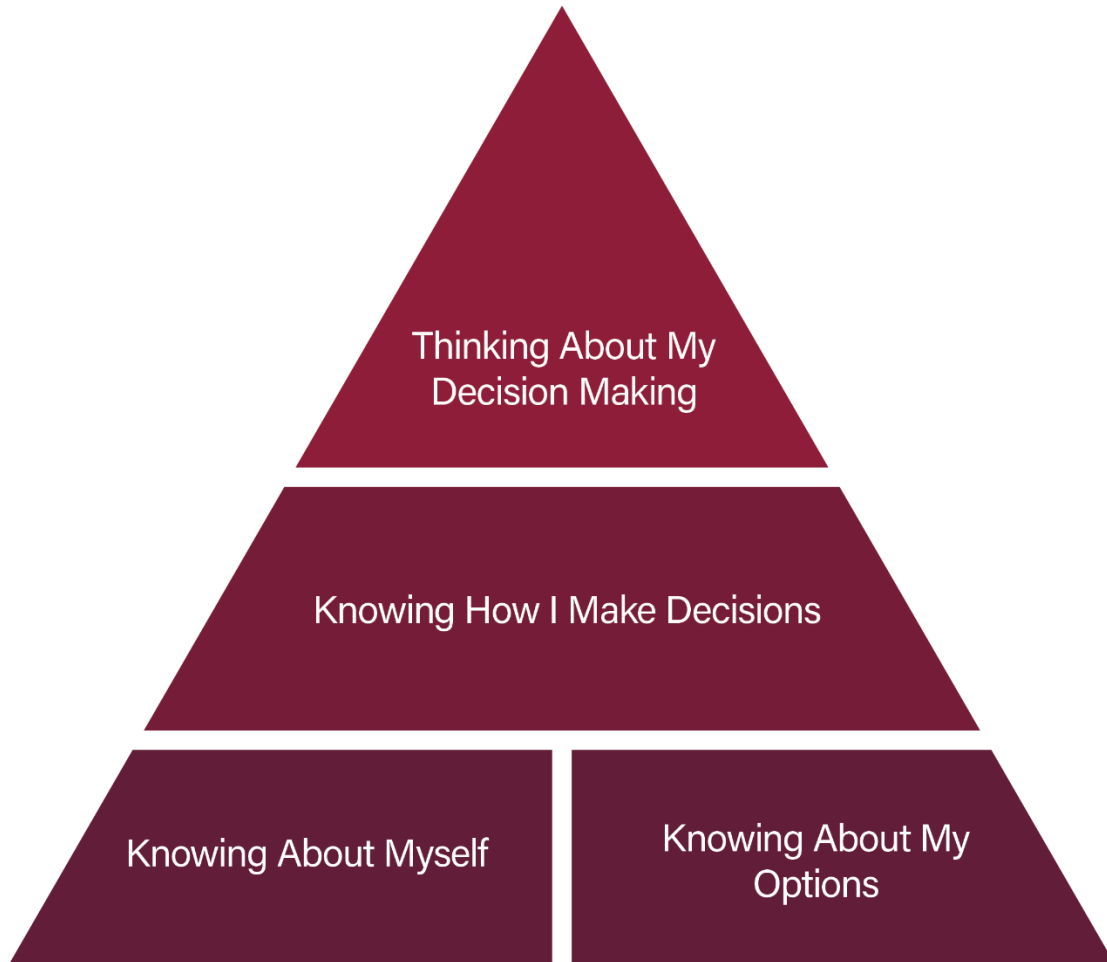**Publication Date:** November 30, 2023

Abstract:

This book's aim is to improve the integration of Cognitive Information Processing (CIP) theory, research, and practice, leading to more cost-effective career interventions that help persons to make informed and careful career decisions over a lifetime. The starting point for the book's content was the 2004 Sampson, Reardon, Peterson, and Lenz book, *Career Counseling and Services: A Cognitive Information Processing Approach*, which itself was a revision of the material in the 1991 Peterson, Sampson, & Reardon book, *Career Development and Services: A Cognitive Approach*. We had four goals for this 2023 book. Our first goal was to update the theory, research, and practice of CIP theory from 2004 through the end of 2022. Our second goal was to expand the authors to better reflect the diverse community of practice that has emerged for CIP theory during those eighteen years. Our third goal was to remove cost as a potential barrier to disseminating knowledge about CIP theory by making the book accessible as an open access publication through Florida State Open Publishing. Finally, our fourth goal was to disseminate the book via open-source software available in libraries which can be used to make periodic book content updates more feasible. This book is organized into six sections. The first section (**Introduction – Chapter 1**) presents key elements of the theory necessary for understanding and using the book's contents. The second section (**Theoretical Concepts Guiding Practice and Research – Chapters 2 through 6**) examines theoretical elements of CIP (Pyramid, CASVE cycle, and decision-making readiness) and adds a new chapter on RIASEC theory and CIP, as well as a new chapter on diversity aspects of CIP theory. The third section (**Strategies for Delivering CIP-Based Career Interventions – Chapters 7 through 11**) presents the differentiated service-delivery model, measures of decision-making readiness, the use of career resources (assessment, information, and instruction), a new chapter on mental health, family, and career intervention, and a new chapter on diversity aspects of CIP-based career interventions. The fourth section (**Use of CIP Theory in Practice – Chapters 12 through 15**) describes the use of CIP-based career interventions in individual cased-managed, brief staff-assisted, and self-help interventions, as well as a new chapter on international applications of CIP theory. The fifth section (**Development, Management, and Evaluation of Career Interventions – Chapters 16 through 20**) details how CIP theory was developed and continues to evolve on the basis of evaluation, accountability, planning, and policy. The sixth and final section (**Future Directions – Chapter 21**) presents a new chapter on the potential future evolution of CIP in relation to theoretical constructs, research, practice, and policy. Each chapter has a common organizational schema as follows: (1) Introductory paragraph indicating the chapter's purpose, outcomes from reading the chapter, and how the chapter is organized, (2) Content organized into sections and subsections with appropriate APA style headings, (3) A summary of key points covered in the chapter to reinforce schemata, (4) Recommended follow-up activities to help readers better understand and apply the content, and (5) Chapter references.

Cognitive Information Processing:
Career Theory, Research, and Practice

Edited by: James P. Sampson, Jr., Janet G. Lenz,
Emily Bullock-Yowell, Debra S. Osborn & Seth C. W. Hayden.

Thinking About My
Decision Making

Knowing How I Make Decisions

Knowing About Myself

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Options

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Dedication

This book is dedicated to the practitioners, managers, and support staff who are working to make effective career interventions available for the many persons who are making career decisions in an increasingly complex world.

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Section 2: Theoretical Concepts Guiding Practice and Research

Section 4: Use of CIP Theory in Practice

Section 5: Development, Management, and Evaluation of Career Interventions

Section 6: Future Directions

Preface

The preface for this book includes a statement of aim and goals, a description of how the book is organized, and a description of how this book can be used with other CIP resources. The preface concludes with acknowledgements.

Aim and Goals for this Book

This book's aim is to improve the integration of Cognitive Information Processing (CIP) theory, research, and practice, leading to more cost-effective career interventions that help persons to make informed and careful career decisions over a lifetime. The starting point for the book's content was the 2004 Sampson, Reardon, Peterson, and Lenz book, *Career Counseling and Services: A Cognitive Information Processing Approach*, which itself was a revision of the 1991 Peterson, Sampson, & Reardon book, *Career Development and Services: A Cognitive Approach*. We had four goals for this edition of our book. Our first goal was to update the theory, research, and practice of CIP theory from 2004 through the end of 2022. Our second goal was to expand the authors to better reflect the diverse community of practice that has emerged for CIP theory over the past eighteen years. Our third goal was to remove cost as a potential barrier to disseminating knowledge about CIP theory by making the book accessible as an open access publication through the Florida State Open Publishing. Finally, our fourth goal was to disseminate the book via open-source software available in libraries which can be used to make periodic book content updates more feasible.

How this Book is Organized

The revised book is organized into six sections. The first section (**Introduction – Chapter 1**) presents key elements of the theory necessary for understanding and using the book's contents. The second section (**Theoretical Concepts Guiding Practice and Research – Chapters 2 through 6**) examines theoretical elements of CIP (Pyramid, CASVE cycle, and decision-making readiness) and adds a new chapter on RIASEC theory and CIP, as well as a new chapter on diversity aspects of CIP theory. The third section (**Strategies for Delivering CIP-Based Career Interventions – Chapters 7 through 11**) presents the differentiated service-delivery model, measures of decision-making readiness, the use of career resources (assessment, information, and instruction), a new chapter on mental health, family, and career intervention, and a new chapter on diversity aspects of CIP-based career interventions. The fourth section (**Use of CIP Theory in Practice – Chapters 12 through 15**) describes the use of CIP-based career interventions in individual cased-managed, brief staff-assisted, and self-help interventions, as well as a new chapter on international applications of CIP theory. The fifth section (**Development, Management, and Evaluation of Career Interventions Chapters 16 through 20**) details how CIP theory was developed and continues to evolve on the basis of evaluation, accountability, planning, and policy. The sixth and final section (**Future Directions – Chapter 21**) presents a new chapter on the potential future evolution of CIP in relation to theoretical constructs, research, practice, and policy.

Each book chapter has a common organizational schema as follows: (1) Introductory paragraph indicating the chapter's purpose, outcomes from reading the chapter, and how the chapter is organized, (2) Content organized into sections and subsections with appropriate APA

style headings, (3) A summary of key points covered in the chapter to reinforce schemata, (4) Recommended follow-up activities to help readers better understand and apply the content, and (5) Chapter references.

Using this Book with Other CIP Theory Resources

In addition to this book, several other regularly updated sources of information on CIP theory include the following:

CIP Bibliography

The CIP Bibliography includes citations organized into the following sections: (a) overview of CIP theory, research, and practice, (b) general principles, (c) foundations of CIP theory, (d) CIP theory and research in vocational behavior, (e) CIP theory and evidence-based practice, (f) CIP applications, (g) CIP-based assessments, (h) resources for client use, (i) reviews of CIP theory, and (j) reviews of CIP-based assessments.

Summary of Vocational Behavior Research using the Career Thoughts Inventory

A spreadsheet is available online that provides a summary of research studies using the Career Thoughts Inventory. For each publication, information is included on author, year, publication type, variables of interest or title, comparison group (or control group), measures, design/analyses, sample size, and findings. Complete references for the publications on this spreadsheet are available on the CIP Bibliography described above. A link to this spreadsheet is also provided on the CIP Bibliography.

Summary of Evidence-Based Practice Research on Career Interventions using CIP Theory

A second spreadsheet is available online that provides a summary of research studies on evidence-based practice on career interventions using CIP theory. For each publication, information is included on author(s), year, publication type, title, intervention, variables of interest, instrumentation, sample, sample demographics, design and/or analyses, and findings. Complete references for the publications on this spreadsheet are available on the CIP Bibliography described above. A link to this spreadsheet is also provided on the CIP Bibliography.

Tech Center Website

The Tech Center website includes content on CIP theory, RIASEC theory, and ICT applications in counseling and career interventions, including bibliographies, career course resources, presentations, career intervention handouts and assessments (service delivery tools), technical reports, and staff training resources.

Acknowledgements

Center and the Department of Educational Psychology and Learning Systems of the College of Education.

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Tallahassee, Florida

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About the Chapter Authors and Editors

Emily Bullock-Yowell received a Ph.D. in Counseling Psychology and Human Systems from Florida State University in 2006. She is currently a Professor in the School of Psychology at the University of Southern Mississippi. She has recently served as a Chair of the Publication Development Council for the National Career Development Association and has been an active member of the Society of Vocational Psychology. She is a licensed psychologist (Mississippi). Her research program focuses on career development and vocational psychology with an emphasis in Holland RIASEC Theory, Cognitive Information Process Theory, issues of decision making, and relevant assessment. Her work emphasizes the practical application of career assistance in the lives and well-being of people from all backgrounds. Additional information on her research and professional activities is available at https://emilybullockyowellphd.weebly.com/.

V. Casey Dozier received a Ph.D. in Counseling and School Psychology from Florida State University in 2013. She is currently a Program Director for Career Advising, Counseling, and Instruction at the Florida State University Career Center, Teaching Faculty in the Educational Psychology and Learning Systems department at Florida State University, and Co-Director for the Center for the Study of Technology in Counseling and Career Development in the Career Center. Previously, she served as the Program Director for Instruction, Research, and Evaluation as well as the Program Director for Career Advising and Counseling at the Florida State University Career Center. Her professional qualifications include being a Licensed Psychologist (State of Florida) and a Nationally Certified Counselor (NBCC). She currently serves on the National Career Development Association (NCDA) Diversity Initiatives and Cultural Inclusion Committee. In addition, she Co-Chairs the Online Resources Subcommittee and serves on the Task Force to Revise the NCDA Minimum Competencies for Multicultural Career Counseling and Development. Her publications include refereed journal articles, book chapters, and national presentations. Dr. Dozier has provided clinical interventions in a variety of settings, with an emphasis on personal and career counseling to assist college students of all ages. Her professional passions are supervision and training, underserved populations, and integrating theory, research, and evidence-based practice. Additional information is available at: https://career.fsu.edu/tech-center/about-us.

Susan Epstein earned her MSLS in Library Science from Florida State University in 1993, as well as graduate certificates in Web Design in 2009 and Instructional Design in 2021. Her current position is Head of Library Access Systems for FSU's Maguire Medical Library, and previous positions include Head of Public Services at the medical library, Librarian at the FSU Career Center for 15 years, and Program Specialist with Leon County Schools. She has served as a leader in various capacities for the Florida & Caribbean Chapter of the Special Libraries Association and is a Senior Member of the Medical Library Association's Academy of Health Information Professionals. Her research interests include the design of special libraries' websites, instructional modules, and online guides, as well as usability and accessibility of library resources. More information on her scholarly works may be found at https://med.fsu.edu/directory/full?directoryId=14630.

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Myrna Hoover received a Master's and Bachelor's degree in Communication from Florida State University. She directed the Florida State University Career Center for over 10 years and has over 36 years of career services experience. She has presented at national, regional, and state conferences on best practices for career services and employer relations and served as a program reviewer of university career centers nationally. Myrna co-authored, the National Career Development Association published monograph, *Employer Relations and Recruitment: An Essential Part of the Postsecondary Career Services*. She has served on taskforces and committees for the National Association of Colleges and Employers and served as Chair of the Florida State University System Career Center Leaders. The Southern Association of Colleges and Employers recognized Myrna with the *2018 Southern Star Award* for her significant and outstanding contributions to the profession. She is a *Lifetime Honorary Member* and past president of the Florida Association of Colleges and Employers, the recipient of that association's *2002 Brownlee Award* for outstanding service and excellence in the field of career services and was recognized for her life-long contribution to the field with the *Myrna P. Hoover 2022 Lifetime Achievement Award* named in her honor. She received the high honor of induction into the National Association of Colleges & Employers *Academy of Fellows*, joining an elite group of college career services, university relations and recruiting professionals with sustained contributions of knowledge, leadership, and excellence in professional practice. See more

information at:
https://www.linkedin.com/in/myrnahoover?utm_source=share&utm_campaign=share_via&utm_content=profile&utm_medium=android_app.

Justin D. Hultman received an Ed.D. in Educational Leadership from Northern Arizona University in 2019. He is currently an Instructional Specialist in the Florida State University Career Center. Previously, he was an Assistant Director in Career Services at the University of South Florida. Before that he was a Student Recruitment Coordinator Sr. in the Mary Lou Fulton Teachers College at Arizona State University. He is a member of the National Career Development Association, as well as a graduate student in the Masters of Science and Educational Specialist degree program in Career Counseling at Florida State University. His research interests include career development, mentorship, and student employment. Additional information on him is available at: https://www.linkedin.com/in/justinhultman/ and https://career.fsu.edu/about-us/staff-directory.

Tristen Hyatt received her Ph.D. in Counselor Education and Supervision at Auburn University in 2018. Presently, she is an Assistant Professor at University of North Georgia and the Clinical Director of UNG's community clinic, which services six counties, providing free counseling services for children, adolescents and adults. She has worked in numerous roles in the mental health field since 2009, including: residential case manager, community support individual, outpatient therapist, crisis counselor, group counselor, intake coordinator in a psychiatric hospital, career counselor. She has worked providing career, individual, couples, crisis and trauma counseling services since entering the mental health field with numerous populations. During her time at Auburn University, Tristen worked providing career counseling services through the Office of Professional and Career Development and the Student Athlete Success Center while also working as a part-time therapist at Columbus State University with the college-aged population. Tristen is Licensed Professional Counselor (LPC), National Certified Counselor (NCC), and a Certified Professional Counseling Supervisor (CPCS). Her research interests include: 1) Intersections of MH & Career, 2) Transitional Issues Facing Veterans, 3) Compounded Trauma on Interpersonal Relationships, 4) Self-Care & WLB, and 5) Counselor in Training Self-Efficacy & Self-Evaluation. She worked as the Career Counseling Program Coordinator, Teaching Faculty, CACREP coordinator, and Chi-Sigma Iota co-faculty advisor at Florida State University from 2018 to summer 2022. She is member of American Counseling Association (ACA), National Career Development Association (NCDA), and Association for Counselor Education and Supervision (ACES). https://www.linkedin.com/in/tristen-hyatt-79629357/.

Emily L. Kennelly received an M.S./Ed.S. degree in Career Counseling and Human Systems from Florida State University in 2011. She is currently the Training and Instructional Designer in the Human Resources Continuous Improvement and Training department and a Research Partner at the Center for the Study of Technology in Counseling and Career Development, all at Florida State University. Additionally, she is a virtual Career and Resume Coach at the ArtBound Initiative. Previously, she was the Senior Assistant Director of Career Advising and Counseling, Assistant Director of Career Advising, Counseling, and Programming, and Assistant Director of Experiential Learning, all at the Florida State University Career Center. Before that, she was the Program Manager of career development and rehabilitation services at the Center for Independent Living in Tallahassee, FL. She is a National Credentialed Counselor

and Certified Professional Resume Writer. Emily is the recipient of a Technology Award from the National Association of Colleges and Employers (NACE) for innovative use of technology in career development and has served on various committees in the National Career Development Association. Her professional interests include the systematic design, development, and delivery of instructional materials in career and professional development settings. Additional information on her is available at: www.linkedin.com/in/emilykennelly.

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Kirsten M. Kinsley received a Master of Science in Counseling and Human Systems, a Specialist in Education Degree in Career Counseling in 1995, and a Master of Science in Library and Information Studies in 1999 from Florida State University. Since 1991, Kirsten has worked in public service and administrative positions at various libraries at FSU, including the Law Research Center and the Career Center Libraries. She has been the Assessment Librarian and a library liaison to social sciences colleges and departments at Florida State University Libraries since 2010. Over the years, Kirsten has served as a member and leader in several national and regional library organizations devoted to assessment in academic libraries (i.e., ALA Core). Her research interests include assessing library user experience using mixed methods approaches and exploring the relationship between library services, spaces, and collections to student success. She and her team conducted a recent study on global library user expectations, comparing pre-to-post-COVID library service survey data. Currently, Kirsten is also a doctoral candidate in Depth Psychology specializing in Jungian Psychology and Archetypal Studies at Pacifica Graduate Institute. For more information on Kirsten's scholarly works, see her OrcID site: https://orcid.org/0000-0003-2809-8233.

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Jukka Lerkkanen received a Ph.D. from the Faculty of Education at the University of Jyväskylä in 2002. He is currently Director of the Open University in the University of Jyväskylä. Before that he was Head of Department in the Teacher Education College and Senior Lecture in counseling at the JAMK University of Applied Sciences. He has served as chair and member in various groups in the Ministry of Education and Culture in Finland and in the European Association of Distance Teaching Universities. He is credentialed as a National Certified Counselor. His research interests include the content and process of needs assessment in career decision-making and the design and delivery of career services, leadership and strategic planning.

Julia Panke Makela earned a Ph.D. in higher education from the University of Illinois Urbana-Champaign, a M.S. in counseling from Florida State University, and a B.S. in computer science from Cornell University. Currently she serves as the Senior Director of LAS Career Services in the College of Liberal Arts & Sciences at the University of Illinois Urbana-Champaign. Throughout her career, Julia has been a strong voice on the national stage for high-quality, practitioner-led program assessment and evaluation in career services practice. Much of her leadership in these areas is grounded in her roles as the Associate Director for Assessment and Research at the University of Illinois Career Center and Founder of the Assessment and Research in Career Services (ARCS) Network. Julia also actively contributes to research communities. Julia serves as a member of the NCDA Board of Directors (2020-2023). She is a Nationally Certified Counselor, Certified Career Counselor, and NCDA Fellow (2019). She has served as a Research Associate with Florida State University's Center for the Study of Technology in Counseling and Career Development, contributing to investigations of technology applications in career services, as well as integrations of Cognitive Information Processing theory into practice. She has also researched academic and career pathways with the Office of Community College Research and Leadership at the University of Illinois, examining ways to improve college degree completion for underserved college student populations, and is well-known for her writing and consultations on ethical practice in career services as a member of the National Career Development Association's (NCDA) Ethics Committee. She is the lead author of NCDA's ethics case study monographs and numerous ethics editorial columns in association publications. For additional information about Julia, visit https://www.linkedin.com/in/julia-makela/.

Laura Reid Marks received a Ph.D. in Counseling Psychology from Purdue University in 2015. She is currently an Assistant Professor in the Department of Educational Psychology and Learning Systems in the College of Education at Florida State University. She was previously an Assistant Professor in the Department of Counseling, Educational Psychology, and Research in the College of Education at the University of Memphis. Dr. Marks is an Associate Editor for the *Journal of Career Development*. She has served as a member of various committees in Division 17 (Society of Counseling Psychology) of the American Psychological Association. Her research is focused on minority stressors (e.g., racism, microaggressions, sizeism) and its effects on the lives of adults from marginalized groups (e.g., people of color, women). Her recent research projects have focused on two primary strands: (a) health disparities in people of color (microaggressions, mental health, and health behaviors) and the development of culturally tailored interventions, and (b) career and professional development issues. Through her research agenda, Dr. Marks, ultimately seeks to reduce health and career disparities for people of color. Additional information on her is available at:
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Deb Osborn received her PhD in the Combined Counseling Psychology and School Psychology program at Florida State University (FSU) in 1998. She is currently a Professor and the Director of Psychological and Counseling Services in the Educational Psychology and Learning Systems Department at FSU. She also co-directs the Center for the Study of Technology in Counseling and Career Development and is a Nationally Certified Counselor. She was previously a faculty member and program director in the Counselor Education program at the University of South Florida for 17 years. She is both a Fellow and Past President of the National Career Development Association. Dr. Osborn's program of research includes identifying predictors of and best practices for increasing positive career outcomes and decreasing negative outcomes; applying career-related theory (especially cognitive information processing theory) in research and practice; designing and using assessments in career services; and exploring the role technology can play in enhancing and extending services. Deb is one of the "Tech Twins" which provide trainings and information on technology, career development, and teaching. She has been honored with several awards, including the Robert M. Gagné Faculty Research Award (2015), the JoAnn Harris-Bowlsbey Award for Excellence in the Field of Technology in Career Development (2010), Outstanding Practitioner Award (National Career Development Association; 2009), Counselor of the Year (Florida Counseling Association; 2006), and the American Counseling Association's Emerging Leader Award (2005). More information can be found at https://education.fsu.edu/deb-osborn.

Sarah Pearson received a Master's in Library and Information Science from Florida State University in 2011. She is currently the librarian at the Florida State University Career Center, a role she has filled since 2014. Previously, she was at the Florida State University College of Law Research Center. There she served as Acquisitions Assistant and various other roles at the law library from 2000 until 2014. She has served as the co-chair of the National Career Development Association's Diversity, Equity, and Inclusion Online Resource sub-committee since Fall 2021, and is secretary-elect to the Special Library Association Florida & Caribbean Community. Additional information on her is available at
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CHAPTER 1
INTRODUCTION AND CONTEXT FOR CIP THEORY

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This chapter describes the nature of career decisions, career problems, and career interventions, and the integration of theory, research, and practice, as well as the evolution, core constructs, aims, assumptions, philosophical foundations, potential benefits, and terminology associated with cognitive information processing (CIP) theory. CIP theory applies general

principles of cognitive information processing to making and implementing current career choices, as well as to fostering future career problem solving and decision-making skills. After reviewing this chapter, the reader should have a foundation for understanding and applying the theory-based practice strategies described in the remainder of the book.

The Nature of Career Decisions, Career Problems, and Career Interventions[1]

This section provides the context for the remaining chapters in this book. After describing the nature of the career decisions people make in their lives and the career problems they face, a definition of career intervention is presented.

Nature of Career Decisions

Career decisions concerning occupations, education, training, employment, and leisure involve a series of choices over a lifetime (Sampson et al., 2004; 2020b; 2023) and reflect individuals' vocational behavior. The focus and sequencing of these decisions vary over time and among individuals. For example, an individual may decide to become an accountant (occupational choice), major in accounting in college (educational choice), apply for and obtain a position as an accountant in a manufacturing business (employment choice), and then complete training in international tax regulations to improve their chances for promotion and travel (training choice). Another individual may make an educational choice to major in psychology (educational choice) without a clear occupational goal in mind and then subsequently apply for and obtain a position as a marketing research analyst (occupational choice) in an on-line retail company (employment choice). Another individual may decide to work in the family's home appliance business as a home appliance installer (employment choice and occupational choice) while completing on-the-job training (training choice), followed by completing a part-time Associate degree in business management at a local community college (educational choice), leading to a subsequent position as manager of the appliance business (occupational and employment choice). For most individuals, occupational, educational, and training choices ultimately lead to paid or unpaid employment choices.

Opportunities and the resulting alternatives available to individuals vary considerably. Some persons have seemingly unlimited opportunities and have few barriers to overcome, while others have limited opportunities and experience many personal or societal barriers to obtaining education, training, and employment. Regardless of the opportunities available, choices ultimately need to be made from among the opportunities that do exist. Time that does not involve paid employment may include time spent in family, leisure, or community activities, and these activities interact with career choices (Sampson et al., 2004; Sampson, Osborn, et al., 2020b, Sampson et al., 2023). For almost all persons in our society, life entails making a series of decisions that have consequences, which in turn influence future decisions (Sampson, Osborn, et al., 2020a).

Career Problems

In CIP theory, a problem to be solved is understood as a gap between an existing and desired state of affairs, or between where you are and where you want to be (Sampson et al.,

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[1] Content in this section was used or adapted from Sampson et al., (2020b). Used or adapted with permission.

2004; Sampson, Osborn, et al., 2020b, Sampson et al., 2023). A career problem involves a gap between a person's current career situation and a future career situation that they desire (Sampson et al., 2004; Sampson, Osborn, et al., 2020b; Sampson et al., 2023). An example could be an overworked and underpaid single parent who is seeking a better paying job with fewer hours to spend more time with their children. Problems are not necessarily negative, as when a person is offered a promotion at work and needs to decide if the extra salary is worth the added responsibilities. The aim of a CIP theory-based career intervention is to assist individuals in solving an immediate career problem while also better preparing them to solve inevitable future career problems by enhancing their understanding of problem solving and decision-making (Sampson et al., 2004). Career choices are ultimately expressed as behaviors as most individuals typically must decide each day to show up for class, training, or work. While it is true that some individuals have favorable life circumstances that allow them multiple options to choose from, and others with unfavorable life circumstances may have minimal options to choose from, a decision is still unavoidable. When unplanned events, such as pandemics or natural disasters occur, choices may be extremely limited for all persons. Choosing not to decide (and therefore not act) is still a decision. Even if limited options are available, learning to become a better career problem solver in making the choice at hand better prepares individuals for a future where more and/or superior options are hopefully available (Sampson et al., 2004; Sampson, Osborn, et al., 2020b). Additional information on career problems may be found later in this chapter, as well as in Chapters 2, 3, 4, and 6 of this book.

Career Interventions

Practitioners offer a wide range of career interventions to assist individuals in making occupational, educational, training, and employment choices. Some individuals receive individual or group-based career interventions to assist them in making decisions from public and private sector service providers. Some individuals seek self-help career interventions in making choices. Both self-help and practitioner-supported career interventions typically involve the use of career assessments and information resources. Some of these interventions and resources are provided without cost, while others require paying a fee. Some educational institutions proactively provide career interventions to assist students in making successful transitions through career education and experiential learning programs, while also providing reactive interventions in response to student requests for career services. Employment services provide interventions in response to requests from individuals or as part of requirements to receive public assistance. Some employers proactively provide career interventions to assist employees in selecting positions, education, and training that benefits both the employer and employee. These interventions are often sought or provided at various times of transition, such as when transitioning from one educational level to another, when transitioning from education or training to employment, when transitioning from employment back to education or training, and when transitioning from one employment position to another (Sampson et al., 2004; Sampson, Osborn, et al., 2020b).

The specific type of career interventions and resources individuals receive are typically influenced by the type of career decision they are making, the type of barriers they are confronted with in making the choice, and the setting where the intervention is provided. Some individuals have more difficulty in making career decisions than others and, as a result, require more assistance from practitioners. Other individuals have less difficulty in making decisions and, as a result, require little or no assistance from practitioners (Sampson et al., 2004; Sampson,

Osborn, et al., 2020b, Sampson et al., 2023). Although the effectiveness of career interventions varies by type, setting, and individuals served, career interventions have been generally shown to be effective in helping individuals make career choices (Brown et al., 2003; Brown & Ryan Krane, 2000; Sampson, Osborn, et al., 2020b; Whiston & James, 2013; Whiston et al., 2017).

When persons receive assistance in making decisions, career interventions are provided by practitioners with titles that fit their training, experience, credentials, and work setting. These practitioners include psychologists, counselors, career counselors, guidance specialists, vocational rehabilitation specialists, career development facilitators, teachers/faculty/academic advisers, career coaches, career advisors, librarians, human resource specialists, and social workers. Persons receiving assistance with a career decision may be referred to as clients, students/advisees, customers, patrons, and employees depending on where they receive career services (Sampson, 2008). In this paper, we refer to persons delivering career interventions as "practitioners," while persons receiving career interventions are referred to as "clients" when they receive practitioner support and "individuals" if they use a self-help intervention (Sampson et al., 2004; Sampson, Osborn, et al., 2020b; Sampson et al., 2023). Additional information on career interventions may be found in Chapters 7, 8, 9, 10, and 11 of this book. Examples of interventions may be found in case studies presented in Chapters 12, 13, and 14.

The Integration of Theory, Research, and Practice in Career Intervention[2]

The development and application of CIP theory is grounded in the integration of theory, research, and practice (Osborn, et. al, 2019). Our understanding of individuals' vocational behavior and the efficacy of career interventions benefit from the integration of theory, research, and practice (Sampson et al., 2014). Theory, research, and practice interact in several ways. Theory guides research by suggesting research questions, by offering a basis for creating measures, and by providing a basis for interpreting results (Sampson et al., 2014). Theory guides practice by offering a basis for conceptualizing individuals' concerns, by creating interventions for specific needs, and by providing a foundation for creating assessment, information, and instructional resources. Research can be used in the revision of current theory and enhances practice by providing an evidence base for determining what works best for which individual needs. In turn, practice contributes to theory revision and the creation of future research questions (Sampson, 2017). Over time, CIP theory has evolved, as depicted in Figure 1.1. While CIP theory's original conceptualization (Peterson et al., 1991) was based on existing theory, prior research, and observations from practice, subsequent presentations of the theory were based on ongoing research and practice, as discussed in the following section on CIP theory's evolution.

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[2] Content in this section was used or adapted from Sampson et al., (2020b). Used or adapted with permission.

Figure 1.1

Integrating Theory, Research, and Practice

Evidence for Theory Revision

1. Existing Theory	→	Theory	
2. Prior Research			→ Practice
3. Observations from Prior Practice	→	Research	

Evidence for Future Research
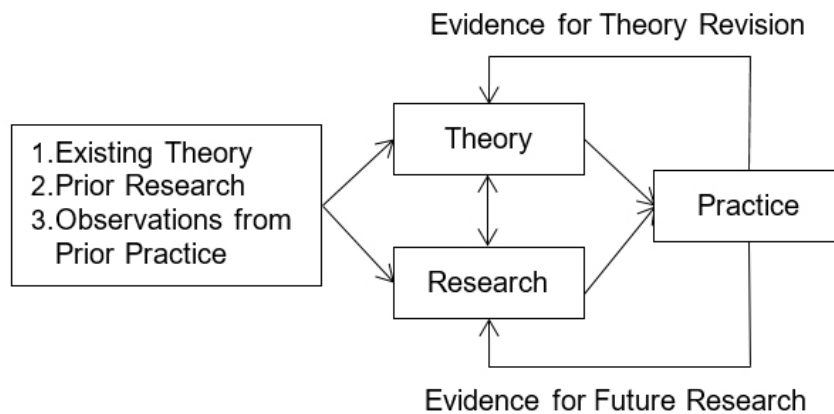
Note. Adapted from "Annual review: A content analysis of career development theory, research, and practice - 2013," by J. P. Sampson, P. C. Hou, J. Kronholz, C. Dozier, M. C. McClain, M. Buzzetta, E. Pawley, T. Finklea, G. W. Peterson, J. G. Lenz, R. C. Reardon, D. S. Osborn, S. C. W. Hayden, G. P. Colvin, and E. L. Kennelly, 2014, *The Career Development Quarterly*, *62*(4), p. 295. https://doi.org/10.1002/j.2161-0045.2014.00085.x. Copyright 2014 by the National Career Development Association. Adapted with permission.

The Evolution of CIP Theory: Fifty Years of Theory, Research, and Practice[3]

Since 1971, an approach to delivering career services has evolved at Florida State University from the interaction among theory, practice, and research. As stated at the beginning of this chapter, CIP theory applies general principles of cognitive information processing to making and implementing current career choices, as well as to fostering future career problem solving and decision-making skill (Peterson et al., 1991; 1996; Sampson, 2008, Sampson et al., 2023; Sampson et al., 1999; Sampson et al., 1992; Sampson, Osborn, et al., 2020b; Sampson et al., 2000, Sampson et al., 2004). CIP theory also builds on the self-directed career service delivery strategies developed at Florida State University (Reardon, 1996; Reardon, 2017; Reardon & Minor, 1975). Peterson et al. (1991) noted that since its inception, CIP theory has been used to guide career interventions and promote understanding of vocational behavior. The theory's name has evolved over time from the cognitive information processing approach to career problem solving and decision-making to simply CIP theory and includes both a theory of vocational behavior and a theory of career intervention (Sampson, 2017). In CIP theory, the study of vocational behavior is defined as, "the examination of individual cognition, affect, and action, which combine with family, social, economic, and organizational factors, to influence the occupational, educational, training, employment, and leisure choices of individuals over a lifetime" (Sampson et al., 2020b, p. 6), whereas *career intervention* involves the delivery of career resources (assessment, information, and instruction) and services (self-help, brief staff-assisted, and individual case-managed) designed to help individuals make informed and careful

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[3] Content in this section was used or adapted from Sampson (2017) and Sampson et al. (2020b). Used or adapted with permission.

career choices (Sampson, 2008). Theoretical assumptions for both vocational behavior and career intervention are presented later in this chapter.

Three factors have influenced the evolution of CIP theory. First, the Florida State University (FSU) Career Center has provided a laboratory for creating theory and related career interventions, which also offered opportunities for students and community members to volunteer as research participants for numerous studies (Sampson, 2017). Second, FSU faculty, FSU students, FSU Career Center staff members, and FSU graduates have created a community of practice for CIP theory. This CIP community of practice is based upon: (a) shared interests; (b) joint activities, exchange of information, and mutual support; and (c) shared practice in experiences, tools, and problem solving (Sampson, 2017; Wenger-Trayner & Wenger-Trayner, 2015). Third, CIP theory has benefited from the inclusion of other theory, such as RIASEC theory (Holland, 1997) to promote understanding of vocational behavior and the creation of career interventions (Reardon & Lenz, 2015), theoretical elements from cognitive therapy (Beck, et al., 1985) to support the development of the Career Thoughts Inventory (CTI) and CTI Workbook (Sampson et al., 1998), and a theory of learning and instruction (Gagné, 1985; Driscoll & Burner, 2022) to support the design of learning resources used in career interventions.

Although the term "CIP theory" has over time come to identify the work completed at Florida State University, the theory is most accurately described as the application of cognitive information processing theory to career problem solving and decision-making (Peterson et al., 1991). Cognitive information processing theory was chosen as a foundation because information processing is key to human learning, and learning is essential in the understanding of self and options required to make occupational, educational, training, and employment choices. Important elements of information processing theory that are included in CIP-based career interventions include: (a) how persons use schemata (knowledge structures) to organize, add to, and revise knowledge they have about themselves and their options; (b) the rational and intuitive processes persons apply to use what they know to arrive at a decision, and (c) the metacognitive processes persons use to manage problem solving (Peterson et al., 1991; Sampson et al., 2004). A CIP-based career intervention should help persons improve the quantity and validity of their knowledge, better understand how and when to use their knowledge in decision-making and improve their capacity to recognize and alter negative career thoughts that can compromise decision-making. Ultimately, a CIP theory-based career intervention should help persons to arrive at informed and careful career choices. An important point made in Chapter 2 is to avoid the misconception that CIP theory overemphasizes cognition as emotions and behavior play an important role in the theory.

Evolution of Core Constructs

CIP theory includes four core constructs (Sampson et al., 2020b; Sampson et al., 2023). The first CIP core construct is the *pyramid of information processing domains* (the "content" of career problem solving and decision-making which involves self-knowledge, options knowledge, decision-making skills, and metacognitions). The second CIP theory core construct is the *CASVE cycle* (the "process" of career problem solving and decision-making which involves the phases of communication, analysis, synthesis, valuing, and execution). Chapter 2 explains these constructs and presents figures showing practitioner and client versions of the pyramid and the CASVE cycle. These CIP constructs can be used by themselves or used to organize the application of other career theories and related resources, such as Holland's RIASEC theory (1997) and the

Self-Directed Search (Holland & Messer, 2017). Chapter 3 focuses on the pyramid and CASVE cycle in relation to employment decision-making. The third CIP core construct is readiness for career decision-making and is explained in Chapter 4. This construct includes capability and complexity in a two-dimensional model of decision-making readiness, based in part on the pyramid and CASVE cycle (Sampson et al., 2004; Sampson et al., 2020b, Sampson et al., 2023). The fourth core CIP theory construct is differentiated service delivery and is explained in Chapter 7. The differentiated service delivery maximizes the cost-effectiveness of career interventions by optimizing the level of staff support in relation to individual readiness for career decision-making (Sampson et al., 2004; Sampson et al., 2020b, Sampson et al., 2023). Complete citations on the theory, research, and practice associated with CIP theory may be found in the CIP Bibliography (Sampson et al., 2022). A discussion of CIP theory applications is presented in Chapter 7 of this book.

Aims of CIP Theory[4]

The aims of CIP theory are to help persons make informed and careful current career choices and, while doing so, to learn improved problem-solving and decision-making skills that they will need for future choices (Peterson et al., 1991; Sampson et al., 2004; 2020b). These aims reflect the wisdom of the oft-repeated metaphor, "Give people a fish and they eat for a day but teach them how to fish and they eat for a lifetime." The dynamic nature of the job market in an information-based, global economy makes this adage even more relevant today.

Theoretical Assumptions about Career Problem Solving and Decision-Making[5]

The career problem solving and decision-making features of CIP theory are based on the following four theoretical assumptions (Peterson et al., 1991; Sampson et al., 2004; 2020b):

1. Career choices engage our emotions (affect), thoughts (cognition), and actions (behavior). Despite the term cognitive being used in the name of this theory, cognition, affect, and behavior are viewed as inseparable in career choice.

2. Effective career choices involve both knowledge (the content of choice or what we need to know) and a process for thinking about the knowledge we have gained (the process of choice or what we need to do).

3. Knowledge of ourselves and the world we live in is constantly evolving and interacting. As we learn from life experience, we organize our knowledge in more complex ways. Career resources and services can help us think about and organize our knowledge, assisting us in sorting through the large amount of information available, and then using the most relevant information in making choices.

4. Career problem solving and decision-making are skills, and similar to any other skill, learning and practice can improve our ability to make choices. Career resources and services can be used to help us learn about and practice the information processing skills needed to become more effective at making career choices.

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[5] Content in this section was used or adapted from Sampson et al., (2004; 2020b). Used or adapted with permission.

Theoretical Assumptions about Career Intervention[6]

The career intervention features of CIP theory are based on the following four theoretical assumptions (Peterson et al., 1991; Sampson & Reardon, 1998; Sampson et al., 2000, Sampson et al., 2004, Sampson, 2008; Sampson et al., 2013):

1. The affective, cognitive, and behavioral factors that influence informed and careful career problem solving and decision-making also influence the efficacy of career interventions. In particular, career interventions are more effective when they address the affective, cognitive, and behavioral aspects of decision-making and when individuals understand the goals, functioning, and potential outcomes of career interventions.

2. Readiness for career problem solving and decision-making and readiness for career intervention varies among individuals and can be measured. By matching the level of readiness (high, medium, and low) to the respective level of career intervention (self-help, brief staff-assisted, and individual case-managed), career intervention efficacy can be improved.

3. In brief staff-assisted and individual case-managed career interventions, the efficacy of career interventions is enhanced by practitioner skills in relationship development, screening, assessment, diagnosis, goal setting, intervention planning, intervention, information, and instruction.

4. Diversity and social justice factors that influence the effectiveness of an individual's career problem solving and decision-making, also influence the effectiveness of career interventions and need to be taken into account in the design and delivery of career resources and services.

CIP Theory and the Philosophy of Science

Structured theories and interventions, such as those associated with CIP theory which are aimed at impacting an individual's career decision-making and career development, are often categorized as modern. Those approaches that are less objective assessment focused and have a more malleable structure are often categorized as post-modern (Bussaca & Rehfuss, 2017). Given that post-modern philosophy values the individual's viewpoint and issues such as cultural inclusion (Kahn & Lourenco, 1999), we argue that CIP theory meets these post-modern stipulations as well. Despite how we categorize theory or intervention tools, McMahon and Watson (2012) have recognized there is an "uneasy relationship" (p. 441) between career intervention tools considered as having a modern foundation (e.g., the Self-Directed Search) and constructivist philosophies. In Sampson's (2009) article specifically addressing the issue of the modern and postmodern debate in career interventions, he urges us to make intervention decisions based on individual needs and cost-effectiveness. Further, Sampson emphasized that both the modern and postmodern approaches have specific benefits and limitations that can allow them to be compatible at times. Bullock-Yowell and Reardon (2021) provided an example of marrying the modern and post-modern through the use of the SDS in the Career Construction Interview (Savickas, 2019).

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We extend these ideas to consider the issue of effectiveness. Are the philosophical underpinnings of an intervention vital if an intervention is effective? As scientists, we prefer assumptions about intervention effectiveness to be tested empirically. Many of the critical ingredients of career intervention have been identified through research. Chapter 7 discusses these critical ingredients in depth and how they are addressed through CIP theory-based career interventions. These ingredients are what research supports as necessary for an intervention to be effective. We encourage practitioners to consider if the approach they are using with clients includes these critical ingredients. In this way, practitioners can assure that their theory-based career interventions are both philosophically appropriate and empirically sound. Whether you view CIP as most grounded in modern or post-modern philosophy, evidence exists that CIP theory addresses most, if not all, of these critical ingredients in its interventions. The effective integration of theory, research, and practice is what CIP practitioners, theorists, and researchers choose to value rather than focusing on the modern vs. post-modern philosophical debate.

Potential Benefits of Effective Career Intervention

Prior to discussing the specific benefits of CIP theory-based interventions, we discuss the general positive impact of career interventions in a broader content, including benefits beyond. In addition to potentially benefitting individuals with career problems, international reviews of career guidance policy (e.g., Barnes et al., 2020; OECD, 2004; Watts, 2014) have observed that effective career interventions contribute to wider public policy objectives. On the one hand, career assistance can be described as an individual right that guarantees access to a good life. On the other hand, it can be viewed by governments as a "soft policy instrument" and as a mechanism for the wider transformation of society as a whole (e.g., Arthur, 2008; Haug et al., 2020; Hooley et al., 2018; Sultana, 2017).

As individuals today stay in education longer than before and face more complex structures of education, work and personal life, career interventions play a vital role in supporting individuals and helping them remain resilient during different transition phases. Career interventions help *individuals* by enabling them to cope with and gain optimal benefit from the complex range of available occupational, educational, training, and employment choices. Effective career development activities and interventions can help individuals to acquire lifelong career management skills as an explicit competence (Cedefop, 2011; European Council, 2004, 2008; OECD, 2004). This competence leads to a better understanding of the relationship between education and employment, broadens their career aspirations and helps them develop a more informed understanding of what they need to do to achieve their goals.

In addition, career interventions, such as individual or group-based interventions, career education, job shadowing and attending job fairs, are positively associated with a broader range of career aspirations. Career interventions motivate individuals to stay in school, increasing their knowledge, skills, and capacity to manage their career choices through their lives and develop abilities to adapt to changing circumstances over time. Career interventions support individuals to increase their awareness of the skills they have acquired informally, or through validation, and consider how these skills can best be deployed. At an individual level, long-term outcomes include resilience and career adaptability, leading to more sustainable employment or further engagement in learning.

Career intervention may have a positive impact on *education and training providers*. In addition to individual learning outcomes, career interventions are connected to the efficiency of

education and training systems by reducing dropout rates and increasing graduation rates. Career interventions can help learners affiliate with programs that meet their needs and contributes to co-creation of institutional culture which focuses on students' support (Lerkkanen, 2002; Vuorinen, 2006). As a long-term outcome, it plays a central role in supporting lifelong learning (for both youth and adults) and the development of human resources to support national and individual economic growth. According to Mann et al. (2020), individuals who participate in career development activities through their schooling can mostly expect positive changes in their educational success and later working lives.

Education and career assistance are fundamental to motivate disadvantaged youth to stay in school and obtain qualifications for the labor market (Cedefop, 2014; Sultana, 2012). The extended role (range of services, frequency of meetings) in career assistance in second change provision seem to be significant in terms of dealing with at-risk-students' everyday problems and career-related issues (Schmitsek, 2019). Hanley et al. (2017) provided evidence on psychosocial outcomes of assistance, noting that individual school-based counselling in secondary schools results in reduction of psychological distress and helps young people move closer to their goals. According Redekopp and Huston (2019), career assistance contributes to individuals' wellbeing through helping them choose and find work that fits them and is located in the healthiest workplaces possible (i.e., finding "good work"), and develop abilities to continuously adapt to changing circumstances.

Turning to the labor market, career interventions may benefit *employers* and improve labor mobility and labor force adaptability by supporting individuals in transitions to and within the labor market. These career interventions may help employers identify employees whose skills and motivation are congruent with the employers' requirements. Career interventions are important in helping to deal with an ageing society or reducing early retirement. By helping to improve the match between supply and demand and assisting active labor market policies, career interventions can reduce individual dependency on income support. As a long-term outcome, career interventions improve labor market efficiency and can help to reduce the effects of unemployment and labor market destabilization (OECD, 2004). For the economy, longer-term outcomes of career interventions can include productivity gains, reductions in skills gaps and shortages, reduced unemployment, and enhanced income levels.

For *governments*, career interventions play a significant role in active labor market policies by engaging with unemployed adults and helping those on career breaks to return to the labor market following different kinds of career breaks. Career interventions have added value as they help employees maintain their employability and gain a better qualification through relevant training or validation of their learning experience. It supports both the individual and enterprises in upskilling in adapting to changes in the labor market in managing the transitions from one job to another. For employers, career intervention serves as a tool for human resource development and maintaining productivity (ELGPN, 2015).

Career interventions are seen to contribute to *wider social equity goals* in education and in the labor market (OECD, 2004). The OECD skills survey (2013) gave particular attention to the low skills trap of low-paid employment with limited access to further education and training which is needed for individuals to develop and maintain skills over the working life and beyond. A recent analysis of PISA 2018 data (Mann et al., 2020) shows that young people from families of higher socio-economic status (SES) have higher career aspirations than those from families of lower SES. This suggests that integrating career interventions in education can help to level the

playing field by addressing systemic inequalities in access to reliable information (Mann et al., 2020). Work-related learning, integrated with career interventions, can promote social mobility of less advantaged students and help them to acquire skills at the work site, which have implications for their future career paths. This is one way that schools can address the social capital needs of their disadvantaged and marginalized students. Data from USA suggest that contact with a career professional can be beneficial in promoting successful college transition especially for low socioeconomic status students (Carey & Martin, 2015).

Countries around the world continue to face ongoing crises associated with the influx of migrants, refugees, and asylum seekers. These individuals often face discrimination and lack of systemic support for securing employment as countries are trying to manage the growing volume of individuals seeking immediate support. The recognition of the skills of these workers is a challenge, because education and training systems and qualifications frameworks differ greatly between countries. Asylum seekers and refugees often experience even greater obstacles than migrants, who can prepare for the recognition process in the country they choose to live and work, while refugees often leave in a hurry and are not always able to bring all their diplomas and certificates with them and/or cannot access the institutions in their host countries that issued their documents (ECRE, 2007). According to Cedefop (2014), career assistance plays an important role for both migrants and for the receiving countries. Induction programs to introduce immigrants, migrants, and asylum seekers to local systems and institutions are a first step in successful integration. The International Association for Educational and Vocational Guidance (IAEVG, 2015) noted that career assistance can support displaced individuals to identify their skills, increase their confidence and hope for the future.

Potential Benefits of CIP Theory-Based Career Interventions

CIP theory-based career interventions have the potential to contribute to the wider public policy objectives described above in three ways. First, as stated earlier in the chapter, the aim of a CIP theory-based career intervention is to assist individuals in solving an immediate career problem while also better preparing them to solve inevitable future career problems by enhancing their understanding of problem solving and decision-making (Sampson et al., 2004). Improving the career management skills of citizens over time allows some individuals to receive less assistance, allowing the reallocation of resources to younger persons and individuals with more extensive needs. Second, the client versions of the pyramid of information processing domains and the CASVE cycle (see Chapter 7) can provide a common schema across educational institutions, government agencies, and employers to facilitate decision-making, allowing citizens to apply what they have learned in one setting to a subsequent setting, potentially contributing to improved efficiency and effectiveness. Third, the differentiated service-delivery model (see Chapter 7) can promote social justice by maximizing citizen access to career interventions by more effectively matching the needs of citizens to a type and level of career service that is most likely to be effective (Sampson et al., 2020b).

Key Terms in CIP Theory[7]

Various key terms are used in this book that relate to helping people make career choices. Because authors differ in their use of terms in the career field, it is important to understand what

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[7] Content in this section was used or adapted from Sampson et al., (2004). Used or adapted with permission.

we mean by the terms we use in this book. Understanding the definitions of various terms will make it easier to read and understand the remainder of the book. After an overview of key terms presented in Table 1-1, this section begins with a review of terms associated with the *nature* of the career choice event and continues with *how* persons seek assistance, *how* career assistance is provided, *who* delivers career resources and services, and *where* career resources and services are provided.

Table 1.1

Overview of Key Terms in the CIP Approach

- Nature of the Career Choice Event
    - Problem
    - Career problem
    - Problem solving
    - Decision-making
    - Career development
    - Lifestyle development
    - Work
    - Career
    - Occupation
    - Job
    - Position
    - Leisure
    - Career decisions
        - Occupational decisions
        - Educational and training decisions
        - Employment decisions
        - Leisure decisions
- How Persons Seek Career Assistance
    - Career shoppers
    - Individuals
    - Clients
    - Students and advisees
    - Customers
    - Patrons
    - Employees
- How Career Assistance Is Provided
    - Career resources
        - Career assessment
            - Self-assessment
            - Practitioner-assisted assessment
        - Career information
            - Occupational information
            - Educational and training information

- Employment information
- Leisure information
  - Instruction
  - o Career services
    - Self-help services
    - Brief staff-assisted services
    - Individual case-managed services
    - Service delivery tools
- Who Delivers Resources and Services
  - o Practitioners
    - Professionals
    - Paraprofessionals
  - o Support staff
- Where Resources and Services Are Provided
  - o Career centers
  - o Counseling centers
  - o Resource and service delivery at a distance

Nature of the Career Choice Event

As stated previously, almost all individuals in our society are engaged in some form of paid or unpaid work during their lifetimes. Whether an individual makes plans or responds to serendipitous events, a recurring sequence of career choices occurs. Providing assistance with career choice is concerned with helping persons to become more effective in solving career problems and making career decisions. But what is a career problem? What are the components of a career decision? It is important to understand the nature of career problem solving and decision-making before we design resources and services to help people make career choices. This section includes definitions of a problem, career problem, problem solving, decision-making, career development, lifestyle development, work, career, occupation, job, position, leisure, and career decision making.

Problem

A *problem* is defined as a gap between an existing and a desired state of affairs (Peterson et al., 1991; 1996; Sampson et al., 2004, 2020b; 2023). Or simply stated, a gap is the difference between where you are and where you want to be (Sampson et al., 2004). Awareness of this gap helps you know that there is a problem that needs to be solved. Awareness of the gap provides a source of motivation to engage in problem solving (Peterson et al., 1996). A problem is not always something negative and is often positive--for example, choosing between two good employment offers, deciding how to invest a bonus, or considering leisure options as part of retirement planning.

Career Problem

A *career problem* involves a gap between a person's current career situation and a future career situation that they desire (Sampson et al., 2004; 2020b; 2023). For example, a person may be unhappy with their current job and want to have a job that is satisfying and provides enough

income to meet their needs. The gap can also involve problems with the work itself or the gap can be between work and various personal, social, and family factors. For example, a person's work may be very rewarding, but the amount of travel required may make it difficult to arrange childcare.

Although career problems share many similarities with other problems we encounter in life, some important differences exist. Career problems are sometimes more complicated than other types of problems we face for the following reasons:

- Career problems involve self-knowledge that we remember from past events in our life. The difficulty is that these memories may change from day to day as a result of our current thoughts and feelings.

- We may have difficulty reconciling our opinion of what is best for us with the opinions of family, friends, and our cultural group about our best course of action.

- We may be overwhelmed with the amount of career information available to us in considering our options. Information is available from people we know, the media, the Internet, schools, employers, and organizations.

- An increasingly rapid rate of change in our society and our economy makes it more difficult to predict the outcomes of our decisions. What was true in the past may not necessarily be true today, much less tomorrow.

- Whereas some decisions have a clear pathway to reach a goal, other decisions have several paths available to reach the goal, with each path having specific advantages and disadvantages.

- A career choice often presents a subsequent set of problems that needs to be solved in order to make the initial decision effective.

Given these reasons, it is easy to see why some persons may become overwhelmed, confused, and anxious about career choices. These powerful emotions can make it more difficult to concentrate and remember important facts during problem solving. As a result, individuals need concrete and easy-to-understand career choice models to help them understand and manage the career choice process (Sampson et al., 1996b; Sampson, Osborn, et al., 2020b; Sampson et al., 2023).

Problem Solving

Problem solving involves a series of thought processes in which information about a problem is used to arrive at a plan of action necessary to remove the gap between an existing and a desired state of affairs. The outcome of problem solving is a choice that has a reasonable chance of closing the gap between where a person is and where they want to be (Peterson et al., 1996; 2002; Sampson et al., 2004; Sampson, Osborn, et al., 2020b). For example, problem solving involves thinking about your job-satisfaction problem and selecting an employment option that has a good chance of providing more satisfaction.

Decision-Making

Decision-making includes problem solving, along with the cognitive and affective processes needed to develop a plan for implementing the solution and taking the risks involved

in following through to complete the plan. The outcome of decision-making is personal behavior that is necessary to solve the problem (Peterson et al., 1996; 2002; Sampson et al., 2004). For example, now that you have made a choice of one or two new employment options (the problem-solving process described previously), you need to plan how you will make the transition.

Career Development

Career development involves the implementation of a series of integrated career decisions over a person's life span (Peterson et al., 1996; 2002; Sampson et al., 2004). Career development is also defined as "the total constellation of economic, sociological, psychological, educational, physical, and chance factors that combine to shape one's career" (Sears, 1982, p. 139). For example, career development can involve the experiences and decisions that resulted in the development of a successful business and the subsequent interest in government lobbying to promote private enterprise.

Lifestyle Development

Lifestyle development involves the integration of career, relationship, spiritual, and leisure decisions that contribute to a guiding purpose, meaning, and direction in one's life. Effective lifestyle development is dependent on effective career development, which, in turn, is dependent on effective decision-making, which is further dependent on effective problem solving (Peterson et al., 1996; 2002; Sampson et al., 2004). For example, a couple may decide to start a business together that is consistent with their spiritual beliefs and provides adequate time for them to pursue the outdoor activities they enjoy. Figure 1.2 graphically depicts these relationships. Consider the following metaphor. Problem solving is the land where a building sits, decision-making is the foundation for the building, career development represents the walls, and lifestyle development is the roof. For the roof to remain, the walls must be strong and sit on a stable foundation, which is dug into secure ground. The success of each element is dependent on the success of the element below. Ultimately then, success in life is at least partially dependent on successful career problem solving.

Figure 1.2

Interdependence of Problem Solving, Decision Making, Career Development, and Lifestyle Development
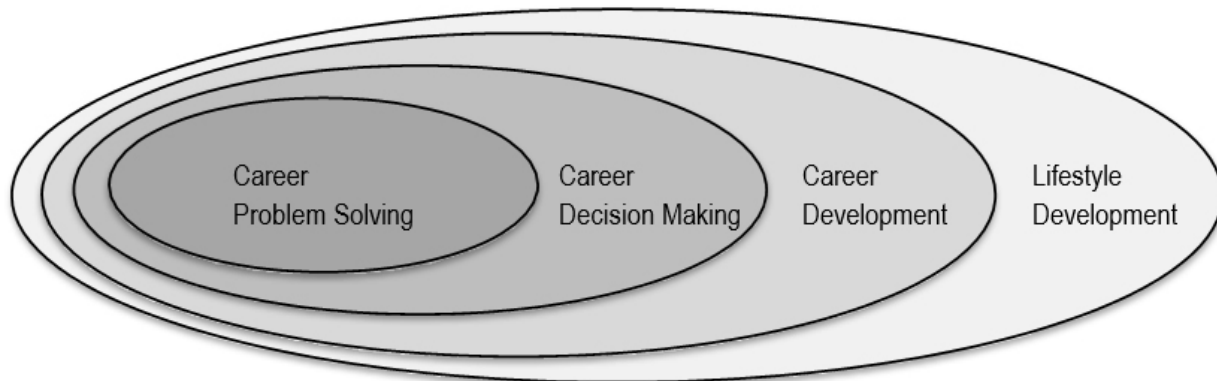
Note. From *Career counseling and services: A cognitive information processing approach* (p. 20), by J. P. Sampson, R. C. Reardon, G. W. Peterson, and J. G. Lenz, Copyright 2004 by Brooks/Cole with copyright transferred to J. P. Sampson, R. C. Reardon, G. W. Peterson, and J. G. Lenz. Adapted with permission.

Work

   Work is defined as "an activity that produces something of value for oneself or others" (Reardon et al., 2022, p. 6). Work can be a paid or an unpaid activity. For example, work can involve analyzing a person's income tax liability or donating time to help a public charity invest the profit earned from a recent fund-raising event.

Career

   Career is defined as "time extended working out of a purposeful life pattern through work undertaken by the person" (Reardon et al., 2022, p. 5). For example, a person can have a career as a business entrepreneur, politician, and active community member in the community where their family has lived for several generations. However, some individuals are less intentional in their work and respond to employment and leisure opportunities as they become available. In this sense, career is best understood in retrospective.

Occupation

   An *occupation* is defined as "a group of similar positions found in different industries or professions" (Reardon et al., 2022, p. 6). For example, a person may major in accounting in college and then become credentialed as a certified public accountant.

Job

   A *job* is defined as "a paid position requiring some similar traits or attributes held by a person" (Reardon et al., 2022, p. 7). For example, a person may have a job as an accountant in a large manufacturing company.

Position

A *position* is defined as "a group of tasks performed in an organization, a unit of work with a recurring or continuous set of tasks. A task is a unit of job behavior with a beginning point and an ending point performed in a matter of hours rather than days" (Reardon et al., 2022, p. 6). For example, a position exists as the accounting supervisor in the purchasing department of a large manufacturing company.

Leisure

Leisure is defined as "Relatively self-determined nonpaid activities and experiences that are available due to discretionary income, time, and social behavior; the activity may be physical, intellectual, volunteer, creative, or some combination of all four" (Reardon et al., 2022, p. 42). Leisure activities may satisfy values, interests, and skills not met by paid employment or they may complement paid employment (Kelly, 2009). For example, an accountant may participate in a softball league and volunteer to assist low-income persons complete their income tax forms.

Career Decisions

Career decisions include choices individuals make about occupations, education, training, employment, and leisure (Sampson et al., 2004; Sampson, Osborn, et al., 2020b; Sampson et al., 2023). Although decisions about occupations, education, training, and employment may be related over time, a specific career decision may involve only one or two of these elements. The sequence and number of these decisions will vary among individuals depending on their situation. *Occupational decisions* involve choosing one occupation or a small group of related occupations as a focal point for making subsequent decisions about education, training, and employment. *Educational and training decisions* involve choosing a college major, program of study, or training opportunity that allows an individual to gain the general competencies (e.g., problem-solving skills, communication skills), specific competencies (e.g., work-related skills), knowledge base, and credentials necessary to obtain or maintain employment. *Employment decisions* involve choosing and applying for a position with an employer in an industry in a sector of the economy. An employment decision is both the ultimate outcome of career decision-making and the starting point for ongoing choices about occupations, education, training, and employment. For example, a person may decide to become an accountant and major in accounting on the way to becoming a certified public accountant with a state government agency. As a second example, a student may major in accounting and then consider various occupations and related employment opportunities close to the time of their graduation. *Leisure decisions* involve choosing self-determined nonpaid activities and experiences that may satisfy values, interests, and skills use not met by employment.

How Persons Seek Career Assistance

Persons assume different roles as they seek career assistance: individuals, clients, students/advisees, customers, patrons, and employees. The experience a person has receiving career assistance, including the amount and type of help they receive, is often influenced by the type of organization where the help is provided. Persons may begin the process of seeking assistance with career problems as "career shoppers" (Reardon et al., 2000). In this book, we generally refer to those who are seeking career assistance as "persons" unless the circumstances

make another term more appropriate, such as being a "client" receiving career counseling in individual case-managed services, or "individuals" if they use self-help interventions.

Career Shoppers

Career shoppers are exploring and evaluating available options for obtaining career assistance. Each source of potential career assistance differs by cost and the nature of the help provided. Cost can be evaluated in terms of the financial resources required or the time and effort involved in receiving assistance. The nature of the help provided can range from anonymous over the Internet to personalized, individual counseling or range from brief involvement in a one-session workshop to intense involvement in a one-semester course. Persons may select the first source of career assistance they find, or they may comparison shop for some time before they select a source of assistance that provides the best chance of meeting their needs at an acceptable cost (Reardon et al., 2000).

Individuals

Individuals receive career assistance by using self-help career resources available in books, magazines, DVDs, videos, audiotapes, apps, and websites. Significant others (e.g., family, friends/peers) can also be a source of self-help information. Individuals can identify which resources meet their needs, locate the resources, sequence the appropriate order for using the resources they have obtained, and use the resource effectively. Individuals may also evaluate whether or not their needs have been met by resource use. If their needs have not been adequately met, they may select additional resources or seek assistance from a practitioner delivering career services.

Clients

Clients use career assessment, information, and instructional resources within the context of a counseling relationship with a career practitioner. These practitioners typically help clients select, locate, sequence, and use career resources. The practitioner varies the pace of resource use to fit the client's career decision-making readiness, as well as monitoring client progress and recommending other service providers that may be needed by the client. Career counseling can be provided in a variety of educational, agency, private, or organizational settings.

Students and Advisees

Students use career assessment, information, and instructional resources within the context of a learning relationship with an instructor in an educational setting. The instructor is typically responsible for selecting, locating, sequencing, and using career resources for groups of students, as well as evaluating student outcomes. Students may voluntarily seek a career course in college to help them in solving a career problem, or they may required to participate in a curricular intervention in school to meet their anticipated career development needs. *Advisees* may develop similar helping relationships with academic advisers, except that the advisers may not be delivering instruction and evaluating class performance.

Customers

Customers use career assessment, information, and instructional resources within the context of a helping relationship with a practitioner in an agency setting (such as a one-stop

career center). Although the roles of the customer and the practitioner are similar to the roles of the client and counselor described previously, the use of the term customer represents an important philosophical shift in some career services delivery settings, particularly governmental agencies. Use of the term customer is meant to imply a greater emphasis on the person's ability to select the resources and services that the person perceives will best meet their needs. Customer also implies greater responsibility for the person to take an active part in the service delivery process (Sampson & Reardon, 1998).

Patrons

Patrons use career information resources in a self-help context with support provided by a librarian, media, or information specialist in response to requests for assistance made in a library or similar resource center. On the basis of a reference information request, library staff members can assist patrons in locating information resources. With appropriate training, information resource managers may also help patrons select, sequence, and use resources, as well as make appropriate referrals to other resources or career service providers. In some libraries, self-assessment and instructional resources may also be available (Johnson & Sampson, 1985). (Chapter 18 provides additional information on how career information resources might be used in library like settings.)

Employees

Employees use career assessment, information, and instructional resources within the context of a helping relationship with a human resource practitioner affiliated with their employer. Similar to clients and customers, employees are responsible for using resources and their service providers (e.g., human resource practitioners) who assist employees in selecting, locating, sequencing, and using resources. Employees may also have the additional option of receiving assistance from human resources practitioners or talent development specialists in negotiating internal training and employment opportunities not available to the general public.

How Career Assistance Is Provided

Career assistance involves providing career resources and career services to persons seeking help in making career choices. Almost all persons seeking assistance use some type of career resource. Some persons need and receive more personalized assistance through a particular career service setting.

Career Resources

Career resources can include assessments, information sources, and instruction (Sampson, 1999; Sampson, 2008; Sampson & Lenz, 2023). The intended outcome of career resource use is learning, but the learning that results is not an isolated event. What is learned from one resource can promote learning from previous and subsequent resources. For example, reading career information can cause persons to reconsider their prior responses to a values assessment in a computer-assisted career guidance system, leading to a more refined search for occupational alternatives.

Career Assessment. *Career assessments* can be used to help persons clarify their self-knowledge (Osborn & Zunker, 2015). This enhanced self-knowledge often helps persons focus on the most relevant aspects of career information and evaluate the benefits and costs associated

with various options. Some career assessments also generate occupational and educational options based on user responses to the construct being measured--for example, interests (Sampson et al., 2004).

Career assessments can be categorized as self-assessment or practitioner assisted. *Self-assessment* resources, such as the Self-Directed Search (Holland & Messer, 2017), are designed to be used without the assistance of a practitioner to select, administer, score, profile, and interpret the measure, assuming the self-assessment has been validated for self-help use. Self-assessments include objective instruments and structured exercises and are available in paper-based and Internet-based versions. This type of assessment is appropriate for individuals with high decision-making readiness who are seeking independent use of career resources.

Practitioner-assisted assessments, such as the Career Thoughts Inventory (CTI) (Sampson et al., 1996a), are designed for use within the context of a helping relationship with a qualified practitioner. The person being served and the practitioner providing assistance collaboratively select an appropriate assessment, with the practitioner supervising or providing administration, scoring, profiling, and interpretation. Practitioner-assisted assessments include objective instruments, structured exercises, card sorts, and interviews (both structured and unstructured). Practitioner-assisted assessments are also available in paper-based, personal computer-based, and Internet-based versions. These types of assessments are appropriate for clients, students, customers, patrons, and employees with moderate to low decision-making readiness who are using career resources with assistance from a practitioner. Even though self-assessment measures can be used effectively in a practitioner-assisted environment, it is unethical to use counselor-assisted assessments in a self-help environment because these measures are not typically validated for this type of use.

Career Information. *Career information* can be used to help persons clarify their knowledge of occupational, educational, training, and employment options. This enhanced knowledge of alternatives can provide a basis for narrowing occupational and educational options generated by career assessments, helping persons evaluate the benefits and costs associated with various alternatives and providing a foundation for developing a plan of action for implementing a choice. Learning about occupations, educational institutions, training opportunities, and employment options can also help persons clarify their values, interests, skills, and employment preferences. Visualizing successful work behaviors (learned by using career information) can help to motivate the person to complete the education and training that is often necessary for employment. Career information is the most commonly available type of career resource.

Career information describes the characteristics of occupations, education, training, and employment that individuals use to clarify their knowledge of career options in problem solving and decision making. *Occupational information* describes the nature of work, the nature of employment, and the requirements for employment for individual occupations (e.g., accountant) and categories of occupations (e.g., Holland RIASEC types). Occupational information is also used to choose and learn about job targets in employment decision making. *Educational and training information* describes the nature of education or training, the nature of the institution or training provider, and admissions for individual institutions or categories of institutions (e.g., community colleges), as well as admissions for individual training providers or categories of training providers. *Employment information* describes sectors, industries, employers, and

positions in the job market. *Leisure information* describes the characteristics of various leisure options and the potential outcomes of leisure activities.

Instruction. *Instruction* is also used to help persons clarify their knowledge of self, of their options, and of the decision-making process. In this way instruction is similar to career assessment and career information described previously, although several differences also exist. For example, instruction integrates several sources of data in a meaningful sequence designed to achieve a specific learning outcome. Instruction also includes some type of evaluation of how well persons have mastered the intended learning objectives. In comparison with career assessment and career information, instruction is a less commonly available type of career resource.

Career Services

Career services typically include a variety of practitioner interventions designed to provide persons with the type of assistance (e.g., counseling, career course, or workshop) and the amount of assistance (e.g., brief staff-assisted or individual case-managed services) they need to effectively solve career problems and make career decisions (Sampson, 1999). These are described more fully in the following sections.

Self-Help Services. *Self-help services* involve self-guided use of assessment, information, and instructional resources in a library-like or Internet-based remote setting where resources have been designed for independent use by individuals with a high readiness for career decision making (Sampson et al., 2000; Sampson et al., 2020b). There is a difference between self-help resources and self-help services. Self-help resources are used independently by a person without help from a practitioner. Self-help services involve a person's self-guided use of resources in an actual setting (career center) or a virtual setting (web site or app) where it is possible to ask questions and receive support when needed.

Brief Staff-Assisted Services. *Brief staff-assisted services* involve practitioner-guided use of assessment, information, and instructional resources in a library-like, classroom, or group setting for clients with moderate readiness for career decision-making. Categories of brief staff-assisted services include (a) drop-in services, (b) career courses with large group interaction, (c) short-term group counseling, and (d) workshops (Sampson et al., 2000). Brief staff-assisted services can be delivered both face-to-face and at a distance.

Individual Case-Managed Services. *Individual case-managed services* involve practitioner-guided use of assessment, information, and instructional resources in an individual office, classroom, or group setting for clients with low readiness for career decision-making. This type of intervention provides the most substantial amount of assistance possible for persons with the greatest need for help. Categories of individual case-managed services include (a) individual counseling, (b) career courses with small group interaction, and (c) long-term group counseling (Sampson et al., 2000). As with brief staff-assisted services, individual case-managed services can be delivered both face-to-face and at a distance.

Service Delivery Tools

Service-delivery tools include signage, maps, resource guides, diagnostic assessment, individual learning plans, and information handouts to help individuals use career resources in a way that best meets their needs (Sampson, 2008). Signage and maps assist individuals in locating

career resources in career resource rooms or career libraries. *Resource guides* identify specific resources (such as assessments and information) and services (such as workshops and individual counseling) that are related to questions commonly asked by individuals. *Information handouts* provide brief, consumable, and easy to use sources of information in a consistent format that can be printed for distribution in a career resource room or disseminated as document files from a website or app. *Diagnostic assessment* includes diagnostic measures and diagnostic interviews that are designed to clarify a person's needs so that an appropriate starting point can be determined for delivering career services. A person having difficulty in making a career choice who completes a diagnostic measure and/or a diagnostic interview is most likely to receive brief staff-assisted or individual case-managed services from a practitioner. Individual learning plans (ILPs) are collaboratively used by practitioners and clients to assist in the planning and use of career resources and services to meet individuals' goals.[8]

Who Delivers Resources and Services

The delivery of career resources and services typically involves a team effort by practitioners and support staff. In large service delivery organizations, staff tend to be more specialized, whereas in small organizations, staff tend to be generalists performing a variety of functions.

Practitioners

Practitioners include professionals and paraprofessionals from a variety of fields. *Professionals* include counselors, psychologists, vocational rehabilitation specialists, teachers/faculty/academic advisers, librarians and media specialists, human resources specialists, and social workers. *Paraprofessionals* include parent and community volunteers, career development facilitators, professionals-in-training, and student peer counselors. Both practitioners and paraprofessionals are limited to practice within the boundaries of their qualifications, training, and experience. In this book, we generally refer to those who are providing career assistance as "practitioners" unless the circumstances make another term more appropriate, such as being a "counselor" delivering career counseling in individual case-managed services.

Support Staff

Support staff may include receptionists, secretaries, program assistants, and clerks who interact with persons being served and provide various organizational functions that make the delivery of resources and services possible. Many support staff have considerable interaction with persons being served, answering questions and helping persons locate and use resources. It is important to make a distinction between professionals and professionalism. Many support staff exhibit considerable professionalism in their work even though their occupation does not have the credentialing or membership organizations typically associated with professions.

Where Resources and Services Are Provided

Career resources and career services are available in both actual physical and virtual settings. Actual physical settings include career and counseling centers in various organizations,

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[8] Adapted with permission from Sampson et al. (2020b).

and virtual settings include websites, apps, secure videoconferencing, and social media platforms.

Career Centers

Career centers in educational and government agency settings deliver resources and services to individuals seeking assistance with occupational, educational, training, and employment decision-making (Sampson, 1999; Sampson & Lenz, 2023). These centers tend to emphasize the full range of career decisions that persons make from exploring occupations through seeking employment. As stated previously, some career center functions are available to patrons in some libraries and to employees in some organizations. Also, some functions are available to persons via multi-professional [one-stop centers](https://www.careeronestop.org/LocalHelp/AmericanJobCenters/find-american-job-centers.aspx). (https://www.careeronestop.org/LocalHelp/AmericanJobCenters/find-american-job-centers.aspx)

Counseling Centers

Counseling centers are most commonly found in higher education institutions and in private-practice settings. These centers tend to emphasize occupational and educational decision-making and the integration of personal, social, and family issues in career choice.

Resource and Service Delivery at a Distance

Web sites and mobile apps are playing an increasingly important role in the distance delivery of resources and services by career centers and counseling centers. Both necessity and convenience are driving factors in the increases in distance delivery (Sampson, Kettunen, et al., 2020b). Living with a disability that limits mobility or living in a remote location that limits access to career resources and services, makes distance delivery a necessity. The convenience of accessing Internet-based career resources and practitioners at more times of the day has further expanded access, making distance service delivery an essential element of career intervention. The value of distance provision has been firmly established during the recent COVID pandemic. This topic is examined in more detail in the section of Chapter 7 entitled, "Face-to-Face and Distance Delivery of Career Interventions."

Chapter 1 Summary

This chapter introduced cognitive information processing theory for providing career assistance to persons solving career problems and making career decisions. After examining the nature of career decisions, career problems, and career interventions, and the integration of theory, research, and practice, the development of CIP theory at Florida State University was briefly described. The aims of CIP theory in helping persons make current and future career choices were explained. Basic assumptions of the theory for career choice and career intervention were then briefly described. CIP theory and the philosophy of science and the potential benefits of career intervention were also examined. The remainder of the chapter explained our definition of key terms that are used throughout the book. Table 1-1 presented an overview of key terms showing how concepts are categorized. Figure 1.2 showed the connection between problem solving, decision-making, career development, and lifestyle development. The next chapter explores what people need to know and do in order to make appropriate choices about occupational, educational, and training options.

Getting the Most Benefit from Reading Chapter 1

To effectively learn the material in this chapter, complete one or more of the following activities:

- In your own words, write the aims of CIP theory, including the adage about fishing.

- Briefly paraphrase the assumptions of CIP theory for career choice and career intervention, and state whether you agree or disagree with each assumption. If you disagree, how would you change the assumption?

- Briefly state your opinion of the position we took regarding the philosophy of science and CIP theory.

- Write out the terms in Table 1.1 and show how the concepts are categorized.

- Draw and label Figure 1.1.

- Draw a picture of the house metaphor that was used to describe the relationships in Figure 1.2.

- Where possible, think of personal examples for the terms presented in this chapter.

- Think about your own experience with using career resources and career services. Have you benefited from using these resources and services? How could your experience have been improved?

- Talk with a friend about how the concepts you learned in this chapter apply to your life.

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CHAPTER 2
HELPING PERSONS MAKE OCCUPATIONAL, EDUCATIONAL, AND TRAINING CHOICES

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This chapter explains how the two core constructs of cognitive information processing (CIP) theory can be used to support individuals in their decision-making about their options, including occupations, education, and training. After reviewing this chapter, readers should understand how practitioners and persons seeking career assistance could apply CIP theory. The chapter begins with making occupational, educational, and training choices, and continues with

using theory to improve practice, the pyramid of information processing domains, the CASVE cycle, using CIP theory with other career theories and models, and potential misconceptions about CIP theory. The chapter ends with a summary and then makes recommendations for getting the most benefit from reading the chapter.

Making Occupational, Educational, and Training Choices[9]

The following section provides context to better understand the pyramid of information processing domains and the CASVE cycle which follow. The section begins with a discussion of how career theory can be used to improve practice and continues with how practitioners can potentially benefit from theory and research, and how persons seeking career assistance can potentially benefit from career theory. The section concludes with strategies for learning how theory can be applied to practice.

Helping Persons Make Occupational, Educational, and Training Choices

As stated in Chapter 1, persons make many career decisions in a lifetime. The focus of career decision-making varies over time and can include choices about occupations, education, training, employment, and leisure. While the range of opportunities open to individuals vary greatly according to their characteristics and circumstances, decisions are unavoidable for most people. Fortunately, it is possible for people to learn how informed and careful choices can be made that may lead to better opportunities and outcomes in the future. This chapter presents constructs which persons can learn to help them with current and future career decisions. The focus of this second chapter is on occupational, educational, and training decisions, with Chapter 3 focusing on employment decisions.

Using Theory to Improve Practice

Solving career problems and making career decisions is often difficult. Individuals making career choices are confronted with a seemingly overwhelming number of things to know and do. Individuals need to clarify what they know about themselves, learn about the options available to them, and then use this information to identify and evaluate their options. What is needed is a set of easy-to-understand concepts that practitioners and individuals can use to guide career choices (Sampson, et al., 2020a), bringing a structure to the often complex factors that affect and are affected by career decisions (Schlesinger et al., 2022). As Sampson et al., (2017) outlined, these intervention or practice concepts are ideally based in theory and research. Additionally, practitioners need to understand problem solving and decision-making in relation to their own careers, as well as know how to help individuals/clients understand career-related concepts that they can readily apply to their own circumstances. Further, all career staff members in an organization should be trained in the selected career theory, to provide a consistent message of how career problems are framed and addressed (Schlesinger et al., 2022). This also applies to selecting career interventions that are theory-based. Having a common theoretical background is especially important when multiple staff members collaborate in serving clients, such as the case in drop-in career services (See Chapter 7). This section continues with a brief discussion of the potential benefits of using theory for practitioners and persons seeking career assistance and concludes with an identification of learning strategies for practitioners using career theory.

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[9] Content in this section was used or adapted from Sampson et al., (2004). Used or adapted with permission.

Potential Benefits of Using Theory and Research for Practitioners

Several potential benefits of practitioners' use of career theory exist (Sampson, 2017). First, career theory helps practitioners understand their own career choices. Before practitioners can successfully use theory to help other people with a career choice, they need to understand both how career theory explains their own vocational behavior and how career theory was (or could have been) used to help them make informed and careful choices. This type of self-reflection and self-awareness is essential if practitioners are to engage in appropriate self-disclosure in career counseling. Second, career theory helps practitioners better understand the vocational behavior of the persons they are serving. Practitioners can gain a greater appreciation for what clients' experience as they engage in career-related changes. This is particularly useful when persons ask questions such as "I have real difficulty in making career choices. How did I get in this mess?" Third, career theory helps practitioners understand the content and process of career problem solving and decision-making, enabling them to recommend specific strategies to assist individuals with career choice concerns--that is, know what to do when, in the counseling process. A thorough understanding and application of career theory helps practitioners have greater confidence that they understand their clients and can be helpful. This practitioner confidence is communicated to the client, who, in turn, is more likely to perceive that counseling can be successful.

Potential Benefits of Using Theory for Persons Seeking Career Assistance

CIP theory's basic concepts are intended to be used by both practitioners and individuals seeking career services. In order for individuals to use theory effectively, theoretical constructs need to be translated into terminology that individuals can readily understand (Sampson et al., 2020a). The language of the pyramid of information processing domains and the CASVE cycle developed by Peterson, et al. (1991) was translated by Sampson et al. (1992) and Sampson, et al. (1996b) to avoid professional jargon and improve readability. These translated constructs, identified in Tables 2.1, 2.2, and 2.3 are presented to individuals on handouts as part of service delivery to help individuals understand and manage career decision-making. These translated concepts, supported by metaphors (such as a wall and cooking), are also used in an instructional workbook designed to reframe negative cognitions and to enhance career decision-making knowledge and skills (Sampson et al., 1996b).

Table 2.1

Translating Core CIP Theoretical Concepts for Use by Persons Seeking Career Assistance

Construct	Pyramid of Information Processing Domains	CASVE Cycle
Translation	What's involved in career choice	A guide to good decision-making
	The *content* of career choice	The *process* of career choice
	What you need to *know*	What you need to *do*

Table 2.2

Translating the Pyramid for use by Persons Seeking Career Assistance

Practitioner Terminology for the Pyramid	Client Terminology for the Pyramid
Self-knowledge domain	Knowing about myself
Options knowledge domain	Knowing about my options
Decision-making skills domain	Knowing how I make decisions
Executive processing domain	Thinking about my decision-making

Table 2.3

Translating the CASVE Cycle for use by Persons Seeking Career Assistance

Practitioner Terminology	Client Terminology
Communication	Knowing I need to make a choice
Analysis	Understanding myself, options, decision-making, and thoughts
Synthesis	Expanding and narrowing my list of options
Valuing	Prioritizing my options
Execution	Implementing my first choice
Communication	Knowing I made a good choice

Learning How Theory Can be Applied to Practice

Practitioners need to be effective learners if they are to attain the potential benefits of using theory identified in the previous section. The following steps can assist in learning and using theory in practice:

1. Read about existing theories.

2. Select a theory (or theories) that aligns with the practitioner's views of career development and has adequate evidence of effectiveness.

3. Visualize concepts in the theory contained in any figures, and then draw the figures from memory.

4. Visualize theoretical concepts contained in metaphors that might be used to present the theory, and explain these concepts to a friend, colleague, or supervisor.

5. Apply the theory to your own career choices by writing an outline that integrates key life events with key theoretical concepts.

6. Explain to a friend, colleague, or supervisor how you would use the theory with different types of clients with different needs.

7. Consider different common career concerns (e.g., commitment to a college major or field of study, choosing an occupation, making a career transition) or a case study focusing on career issues and apply the theoretical framework to conceptualize the case and to create a plan of action.

8. Use the theory with a client, reflect on your experience, and then review your work with your supervisor.

9. Continue using the theory or select a new theory, repeating the steps above.

To make it easier for practitioners to learn and apply CIP theory, the text presents theoretical constructs that are often supported by drawings presented in figures, metaphors, and case studies.

The Pyramid of Information Processing Domains[10]

The information processing domains related to career problem solving and decision-making can be conceptualized as a pyramid with three levels or domains, as shown in Figure 2.1 (Peterson et al., 1991; 2002; Sampson, 2008, Sampson et al., 2004; 2020a; 2023). The three domains are the knowledge domain, the decision-making skills domain, and the executive processing domain. The elements within the domains are related and impact each other (Hayden & Osborn, 2020; Osborn et al., 2020, 2021) and those relationships are represented by dotted lines to illustrate their uniqueness but also the permeable boundaries among each. The pyramid is intended to increase practitioner and client awareness of key aspects of career problem solving and decision-making. Figure 2.2 presents the client version of the pyramid of information processing domains. The following section begins with an examination of knowledge domains and continues with the decision-making and executive processing domains.

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Figure 2.1

Practitioner Version of the Pyramid of Information Processing Domains
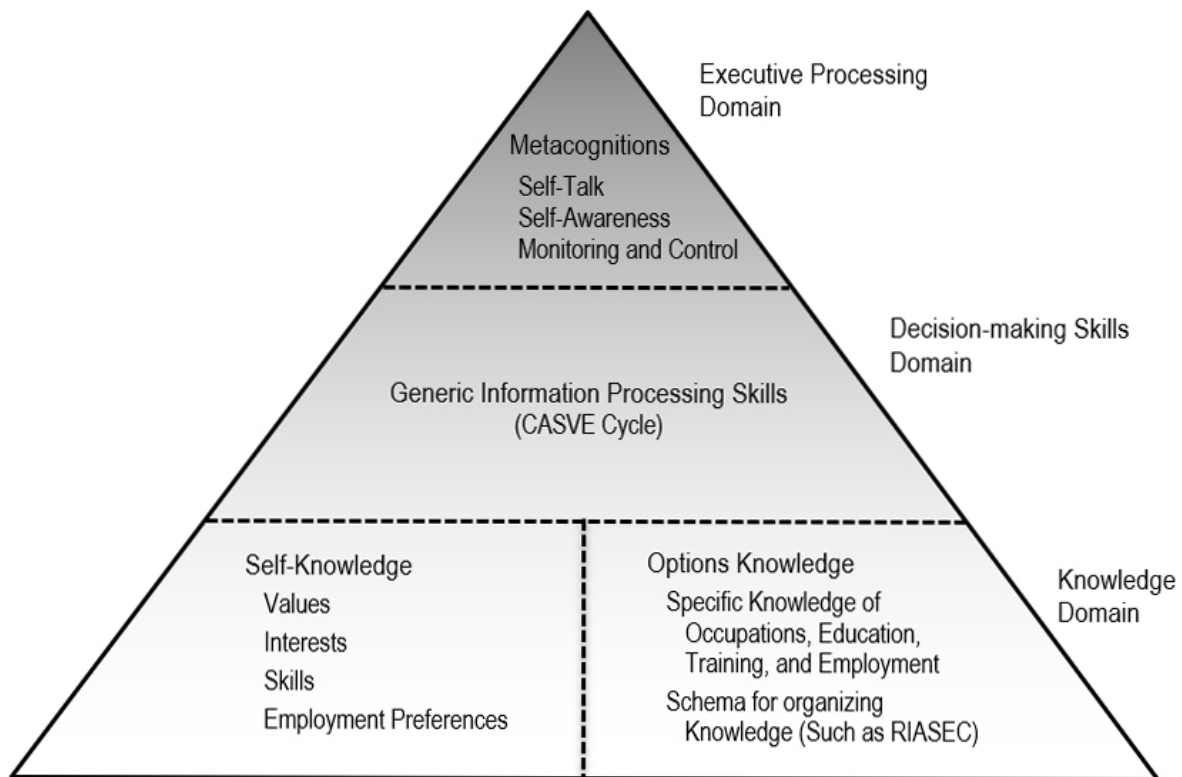
Note. Adapted from *Career counseling and services: A cognitive information processing approach* (p. 20), by J. P. Sampson, R. C. Reardon, G. W. Peterson, and J. G. Lenz, Copyright 2004 by Brooks/Cole with copyright transferred to J. P. Sampson, R. C. Reardon, G. W. Peterson, and J. G. Lenz. Adapted with permission.

Figure 2.2

Client Version of the Pyramid of Information Processing Domains
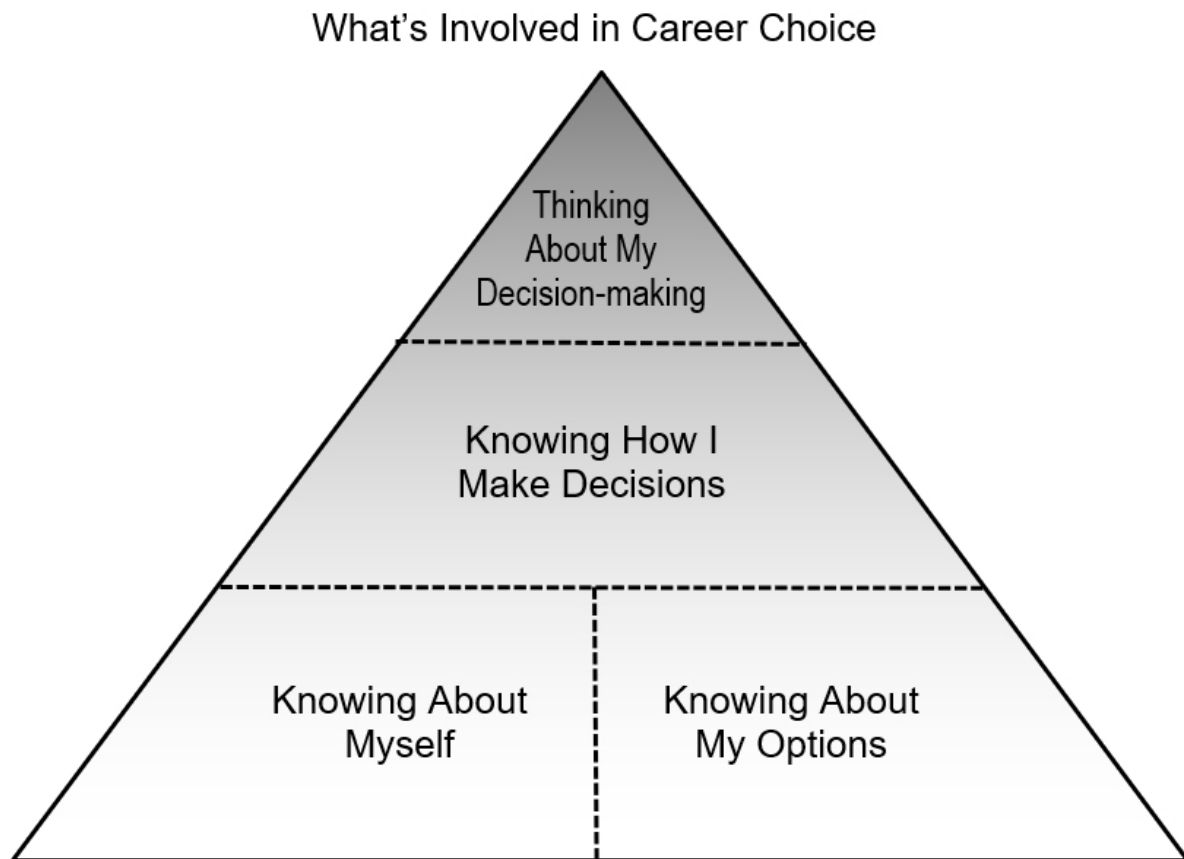
What's Involved in Career Choice

Thinking
About My
Decision-making

Knowing How I
Make Decisions

Knowing About
Myself

Knowing About
My Options

What you need to *know* to make an *informed* and *careful* career choice

Note. Adapted from "A cognitive approach to career services: Translating concepts into practice," by J. P. Sampson, G. W. Peterson, J. G. Lenz, and R. C. Reardon, 1992, *The Career Development Quarterly*, *41*(1), p. 70. https://doi.org/10.1002/j.2161-0045.1992.tb00360.x. Copyright 1992 by the National Career Development Association. Adapted with permission.

Knowledge Domains

Over a century ago, Frank Parsons (1909) stated that appropriate occupational choices are made when individuals combine a clear perception of self-knowledge with an informed level of occupational knowledge through "true reasoning." In CIP theory, the domains of self-knowledge and options knowledge lie at the base of the Pyramid and "true reasoning" is represented in the form of the CASVE Cycle. Self-knowledge and options knowledge consist of networks of memory structures called *schemata* (singular, *schema*) that develop over the life of the individual (Peterson et al., 2002). As with Parsons, career problem solving and decision-making begin with self-knowledge as a cornerstone of the decision-making process.

Knowledge of Self or "Knowing About Myself"

As a theoretical construct, self-knowledge addresses the fundamental question, "Who am I?" Moreover, when used as a construct in making occupational, educational and training decisions in the context of career exploration, self-knowledge is developed through integration of two principal sources (Tulving, 1972), (a) generalizations from life experiences including suggestions and advice from others (episodic memory), and (b) information obtained from psychological measures such as interest, personality, and values inventories, as well as aptitude and abilities tests (semantic memory). Individuals apply knowledge from these sources as they relate to the dimensions of self-knowledge, namely, one's values, interests, and skills when making career choices.

Values. Values motivate persons to work (Reardon, et al., 2022; Sampson, 2008). Rokeach (1973) noted that values are more enduring aspects of personality than interests that are acquired early in life and have a bearing on motivation to perform the work of an occupation, as well as educational choices (Balsamo et al., 2013). Hall and Davis (2007) emphasized values as an integral part of the decision-making process. Values might be defined as what is important to a person as they consider their options. A sample tool that measures values and relates them to a wide variety of occupations is SIGI3 (2021) which is administered on-line. Prominent values measured by SIGI3 include Contribution to Society, High Income, Independence, Leadership, Leisure, Prestige, Security, and Variety. Other values might include intellectual stimulation, achievement, cultural esthetics, or social contribution (Balsamo et al., 2013). More recently, there has been an emphasis on work providing meaning (Peterson et al., 2017; Steger et al., 2012). Values can also be assessed and prioritized through tools such as values card sorts or inventories such as the Values Scale (Super & Nevill, 1989) or other instruments such as the Decision Space Worksheet (Peterson et al., 2016).

Interests. Interests are activities or behaviors that persons enjoy (Reardon, et al., 2022; Sampson, 2008). Exploration of the interest component of self-knowledge is often an auspicious starting point. The pursuit of identifying or confirming one's likes and dislikes of occupational activities helps individuals begin to think about career options they are considering as well as formulating additional options to consider. The use of interest inventories and card sorts are helpful in clarifying one's interests (Dozier et al., 2019; Osborn & Zunker, 2016; Portnoi et al., 2004). Some interest inventories, such as the Standard SDS (SDS, Holland & Messer, 2017a), help identify one's dominant interest areas, such as Investigative, Artistic, Social, and Enterprising, that can then be matched to a variety of occupations using the *Occupations Finder* (Holland & Messer, 2017b), while other inventories, such as the Strong Interest Inventory (SII; Donnay et al., 2005), match one's likes and dislikes to persons successfully employed in variety of occupations. In addition to considering the results of interest inventories, a review of one's school and work experiences is very important in identifying and confirming one's likes and dislikes with respect to options an individual is considering. All of these sources of information are integrated to enhance and clarify one's self knowledge of interests (Dozier et al., 2019 & Portnoi, et al., 2004), which is vital in addressing the question, "Will I like or even enjoy the responsibilities, activities, duties, tasks, and work environment of an occupation I am considering?"

Skills. Skills are activities or behaviors that persons are good at performing (Reardon, et al., 2022; Sampson, 2008). Skills and interests share a commonality in that they both involve activities or behaviors. The metaphor of a coin having two sides applies here. One side of the

coin represents an activity or behavior that a person likes, and the other side represents an activity or behavior that a person is good at performing. Therefore, it is possible to like an activity that you may or may not be good at, while also being good at an activity that you may or may not like. The Campbell Interest and Skills Survey (Campbell, 2002) operationalizes this concept of the relationship between interests and skills.

All work (paid and unpaid) requires certain knowledge and skills to perform the work of an occupation at a required minimum level over an extended period of time without fatigue or burnout. In career and occupational exploration, important questions to ask are: Do I have the requisite capabilities to (1) qualify for educational and training programs to learn job knowledge and skills to perform the work tasks associated with an option I am considering? (2) pass any required certification or licensing examinations to enter the field? and (3) perform the work at a satisfactory or above level over time? The answers to these questions require accurate self-knowledge gained through life, education, and work experience, as well as through achievement measures, aptitude tests, and self-rating of abilities and skills.

Some skills that are relevant in career exploration include those measured by academic aptitude or achievement tests such as the Scholastic Aptitude Test (SAT) or the American College Test (ACT) for admission to colleges and universities. When entering post-baccalaureate professional programs, examples of admissions tests include the Graduate Record Examination (GRE), the Medical College Admissions Test (MCAT), and the Law School Aptitude test (LSAT). Assessments required for entry to educational programs generally emphasize verbal, quantitative, and spatial cognitive abilities. Entry to many military occupations requires taking the [Armed Services Vocational Aptitude Battery](#) (ASVAB) which measures a variety of verbal, quantitative, spatial, and mechanical abilities or aptitudes. Entry to Law Enforcement occupations include tests for demonstrating physical abilities and conditioning in addition to verbal, quantitative, and mechanical achievement, abilities, or aptitudes. Dental schools require eye-hand coordination assessments in addition to verbal and quantitative abilities and knowledge. Entry to become a utility line worker for a power corporation often requires mechanical and physical examinations. Large crane operators require assessment of mental abilities as well as physical condition and eye-hand coordination. Finally, many occupations, such as in the healthcare field, law, or accounting, require passing a state or national test of occupational knowledge to achieve certification or licensure to practice a particular profession. These tests require not only mastery of a circumscribed knowledge base, but also the verbal and quantitative abilities to answer multiple choice test items or compose essays in a limited time frame. The self-knowledge aspect of assessing abilities, aptitudes, and knowledge in the consideration of options relates to either having taken such instruments in the past or estimating the likelihood of earning scores to qualify for entry into education or training programs from prior testing experiences.

Other Aspects of Self-Knowledge. Self-knowledge is not limited to career-related values, interests, and skills, but includes an unlimited array of identities and descriptors individuals find relevant to their career concern. (See Chapter 3 for an explanation of employment preferences.) Self-knowledge may include multiple demographic identifiers, such as gender, age, sexual orientation, socio-economic status, religion, disability, race, ethnicity, marital status and the like. Cultural context and societal experiences (including opportunities and barriers) may also play a part in the development and expression of self-knowledge components. Personality and mental health may also be important aspects of the self that bear consideration in

the decision. Graesser et al. (2019) points out that knowledge is shaped by the world around us which could include everything from one's personal identity to the technology they use (or do not have access to) to explore new ideas. In addition, not all aspects of self-knowledge might be equally relevant for the career decision-making and problem-solving process, and the timing of the career decision in a person's life may influence which factors are most salient.

Knowledge of Career Options or "Knowing About My Options"

Options knowledge includes information regarding individual occupational, educational, training, employment, and leisure options, skills in processing and then applying that information to the career problem, and an awareness of emotional responses related to the options, as well as possession of a schema for how the world of work is organized. Knowledge of individual occupational, educational, training, and employment options occurs as a result of direct experiences or observations of the experiences of others in real life or as portrayed through the media. These experiences shaping options knowledge may be positive, negative and/or neutral. For example, receiving praise for a task or a promotion would be positive, whereas experiencing discrimination would be negative. These experiences influence perspectives on occupations, building over the lifespan, and therefore, knowledge of and judgments about individual career options increase over time with experience.

Options knowledge includes factual information specific to the options being considered and is stored in semantic memory. Semantic memory is structured as a series of verifiable facts rather than personal perceptions (Tulving, 1972). Neither can the interpretation of past events nor present emotions overly influence semantic memory. For example, individuals who had previously learned the work activities of an accountant and an auditor would likely be able to distinguish the work activities of the two occupations even when they are moderately depressed or anxious. For occupations, relevant options knowledge might include expected work tasks, salary, training requirements, employers, and outlook. For educational and training options, one might be interested in the length, costs, and focus of the training, as well as post-training success. For employment options, considerations might include organizational size, offered salary, opportunity for advancement, and commitment to diversity. While this information can be verified, it also is subject to change on a micro or macro level. At the micro level, an organization may expand or narrow the types of services it provides, and in turn, the types of employee knowledge and skills needed is affected. At the macro level, natural disasters or pandemics might impact current definitions of occupations. For example, prior to 2021, occupations such as teaching and counseling were primarily conducted in face-to-face settings, but many shifted to primarily online delivery modes when stay-at-home mandates were enforced due to the COVID-19 pandemic.

Knowing about options also includes understanding the intrapersonal (e.g., personal emotional response) and potential interpersonal impact of each option, both logistically and emotionally. Acknowledging and attending to cognitions and emotions that occur as one explores options provides important information about the possible acceptability of that option. For example, feeling nervous because an option requires a great deal of travel, coupled with the thought that a family member's health will require a more stable presence by the individual are salient information points for that option. Along the same lines, the current and perceived mental health of the decision maker can be another valid component of options knowledge. There may be options that an individual wants to exclude or include because of the likely impact on their

mental health, or the likely impact their mental health might have on their ability to successfully perform the required tasks.

A schema for the world of work helps people organize what they know and want to learn about occupations, education, training, and employment. A strong world-of-work schema reduces complexity enough that individuals do not feel overwhelmed with information yet provides enough valid links to options to facilitate exploration and build options knowledge as new information is processed. Brown and Brooks (1991) noted that in order for clients to make effective use of information, they need a schema to organize the information they obtain. Law (1996) noted that individuals need to develop constructs to organize information in order to avoid being overwhelmed by what they learn. Examples of world of work schemas include the Holland hexagon (Holland, 1997), Standard Occupational Classification system (https://www.bls.gov/soc/), and skilled versus unskilled labor.

To successfully build options knowledge, individuals must know how to locate, evaluate, and appropriately apply information to career problems (Sampson et al., 2018). The particular media or information an individual engages or has access to will influence the knowledge they acquire both in accuracy and nature (Graesser et al., 2019). Common sources of options information might include databases such as O*Net or the online *Occupational Outlook Handbook*, or job boards such as glassdoor.com, blogs or social media posts about individuals in specific work-related roles. In addition to learning about occupational options, individuals may seek information about education and training. Websites such as careeronestop.org, petersons.com/college-search.aspx, or collegescorecard.ed.gov have searchable databases on education and training providers. Information can vary in terms of accuracy, currency, and usefulness for the career problem (Sampson et al., 2018). The CASVE Cycle describes a process for applying self and options knowledge to the career problem.

Decision-Making Skills Domain or "Knowing How I Make Decisions"

Above the knowledge domain is the decision-making skills domain, which includes the generic information processing skills that individuals use to solve problems and make decisions. The *CASVE cycle* (described later in this chapter) is the CIP theory-based approach to problem solving and decision-making. Other theoretical perspectives on decision-making processes (e.g., Gati, 1986; Gati & Levin, 2014; Gelatt, 1962, 1989; Harris-Bowlsbey & Lisansky, 1998; Katz, 1966; Kinnier & Krumboltz, 1986; Lent & Brown, 2020; Tiedeman & O'Hara, 1963; Yost & Corbishley, 1987) and decision-making styles (e.g., Johnson, 1978) can also be used to enhance one's knowledge about career decision-making.

Executive Processing Domain or "Thinking About My Decision-making"

At the top of the pyramid is the executive processing domain, which includes metacognitions. *Metacognitions* control the selection and sequencing of cognitive strategies used to solve a career problem through self-talk, self-awareness, and monitoring and control.

Self-talk. Self-talk is the quick, silent conversation people have with themselves about how well they are completing a given task, including career problem solving and decision-making. Positive self-talk helps individuals make career choices by helping to keep them motivated to engage in various career problem-solving and decision-making tasks. An example of positive self-talk would be "I can make a good choice; I just need to get the information I need

and then think through my options." Self-talk can also be negative, which inhibits the process of career problem solving and decision-making. An example of negative self-talk would be "I am no good at making decisions, so I might as well give up."

    Self-Awareness. *Self-awareness* is the extent to which people are aware of themselves, pre-existing knowledge, and personal tendencies (Fiedler et al., 2019) as they progress through the problem-solving and decision-making process (including an awareness of the nature and impact of self-talk on their behavior). An example of self-awareness would be recognizing when old patterns of negative self-talk are causing an individual to lose motivation for solving their career problem ("What's the point of continuing to job search? No one is going to hire me with my background").

    Monitoring and Control. Monitoring and control refer to the extent to which people are able to monitor where they are in the problem-solving process and control the amount of attention and information required for problem solving (including monitoring when their self-talk is dysfunctional and subsequently controlling or altering their thoughts to be more appropriate). Nearly all cognitive tasks engage the metacognition monitoring and control function (Fiedler et al., 2019). An example of monitoring and control in the complex career decision-making process would be knowing when enough information has been obtained at a given phase of the CASVE cycle and moving on to the next phase. See Table 2.4 for a summary of the pyramid of information processing domains.

Table 2.4

Summary of Elements from the Pyramid of Information Processing Domains

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Knowledge domain

Self-knowledge

Values motivate persons to work.

Interests are activities that persons enjoy.

Skills are activities that persons are good at performing.

Employment preferences are aspects of work that persons seek in their job (such as opportunities for travel) or seek to avoid (such as lifting heavy objects).

Values, interests, skills, and employment preferences are influenced by individuals' characteristics, life experiences, cultures, and religious or spiritual beliefs.

Options knowledge

Obtaining knowledge to help evaluate specific occupational, educational, training, employment, or leisure options.

Organizing knowledge to help identify and compare occupational, educational, training, or employment options.

Decision-making skills domain

The process typically used to make important decisions, including the possibility of using a model like the CASVE cycle or similar approach.

Executive processing domain (metacognitions)

Self-talk is the silent conversation individuals have with themselves about the progress they are making in decision-making and their expectations for successful decision-making in the future. Positive self-talk enhances problem solving, making it easier to learn from career assessments and information. Negative self-talk detracts from problem solving, making it more difficult to learn from career assessments and information. As negative self-talk increases, readiness for decision-making decreases.

Self-awareness helps individuals to be aware of themselves as they make decisions, including awareness of the influence of self-talk on the process.

Monitoring and control help individuals to identify where they are in making a decision and to move on through the process to control the amount of attention and information required for problem solving, such as identifying when self-talk is negative and then altering their thoughts to be more positive, helping them to make progress through the decision-making process. Another example would involve identifying when anxiety about a tentative choice of an occupation can lead an individual to gain additional information before proceeding.

Note. Adapted from Sampson (2008, p. 28-29).

Interrelated and Interdependent Nature of Domains in the Pyramid

In terms of a broader conceptualization of CIP theory, the four domains of the Pyramid comprise interconnected components of a comprehensive cognitive system in which they are holistically (Hayden & Osborn, 2020; Osborn et al., 2020, 2021) integrated at each phase of the

decision-making domain (conceptualized in CIP theory as the CASVE cycle) with the goal of ultimately enabling individuals to make informed and careful career decisions.

The domains of the pyramid are strongly interrelated from the top down. The executive processing domain influences the content and functioning of all other domains. Decision-making skills influence the content and functioning of the knowledge domains. For example, assume a client is engaging in negative self-talk such as "I'm not very good at making big decisions. I can't make a decision until all of my family agrees that my choice is the right choice for me. Then I will know what to do." The client may be less likely to take responsibility for choosing and attempt a systematic decision-making strategy, given the perception of being a poor decision maker. In this situation, dependency might then be used to cope with the anxiety accompanying the choice process. Negative self-talk and the accompanying anxiety will influence the interpretation of past events, likely resulting in negative self-perceptions of interests and skills. Given the perception of not being a good decision maker, the client in this example is also not likely to engage in the exploratory behaviors necessary to obtain accurate occupational knowledge. Negative self-talk can have an unfavorable influence on all aspects of career choice. However, through self-awareness and monitoring and control of negative self-talk, individuals can learn to reframe negative self-talk into positive self-talk, which allows them to apply their own effective problem-solving and decision-making skills, enhancing self-knowledge and options knowledge in the process. Theoretically, persons with positive self-talk are more capable of independent and effective career problem solving and, hence, are less likely to need practitioner help in making career choices (Sampson et al., 1996a; Sampson et al., 2004; Sampson et al., 2020).

The CASVE Cycle[11]

The process involved with problem solving and decision-making can be conceptualized in terms of the CASVE cycle presented in Figure 2.3 (Bullock-Yowell, et al., 2015; Peterson et al., 1991; 2002; Sampson, 2008, Sampson et al., 2004; 2020b; in press). The CASVE cycle is intended to increase client and practitioner awareness of the key phases in the career problem-solving and decision-making process, as well as improve client overall career problem-solving and decision-making skills. By improving their decision-making skills, persons can increase the likelihood of making effective career choices for both the current decision they face and future career decisions that will inevitably arise. Figure 2.4 presents the client version of the CASVE cycle. The CASVE cycle includes the sequential phases of Communication, Analysis, Synthesis, Valuing, and Execution. The cycle begins with Communication. The term cycle is intentionally used to reference the eventual return to the Communication phase after a decision has been executed and the likelihood that many decision makers will move through the cycle multiple times. Subsequent navigation through the CASVE cycle could be to accommodate unsatisfying decisions or new decisions that arise from initial choices made in the first navigation of the cycle. The original science and formation of the CIP theoyr-based CASVE cycle can be reviewed in Peterson et al., 1991, 1996, but later cognitive science literature continues to support this approach to problem solving and decision-making (Fischer et al., 2012; Galotti, 2019; Hall & Davis, 2007; Pretz, et al., 2003).

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[11] Content in this section was used or adapted from Sampson et al., (2004) and Sampson (2008). Used or adapted with permission.

Figure 2.3

Practitioner Version of the CASVE Cycle
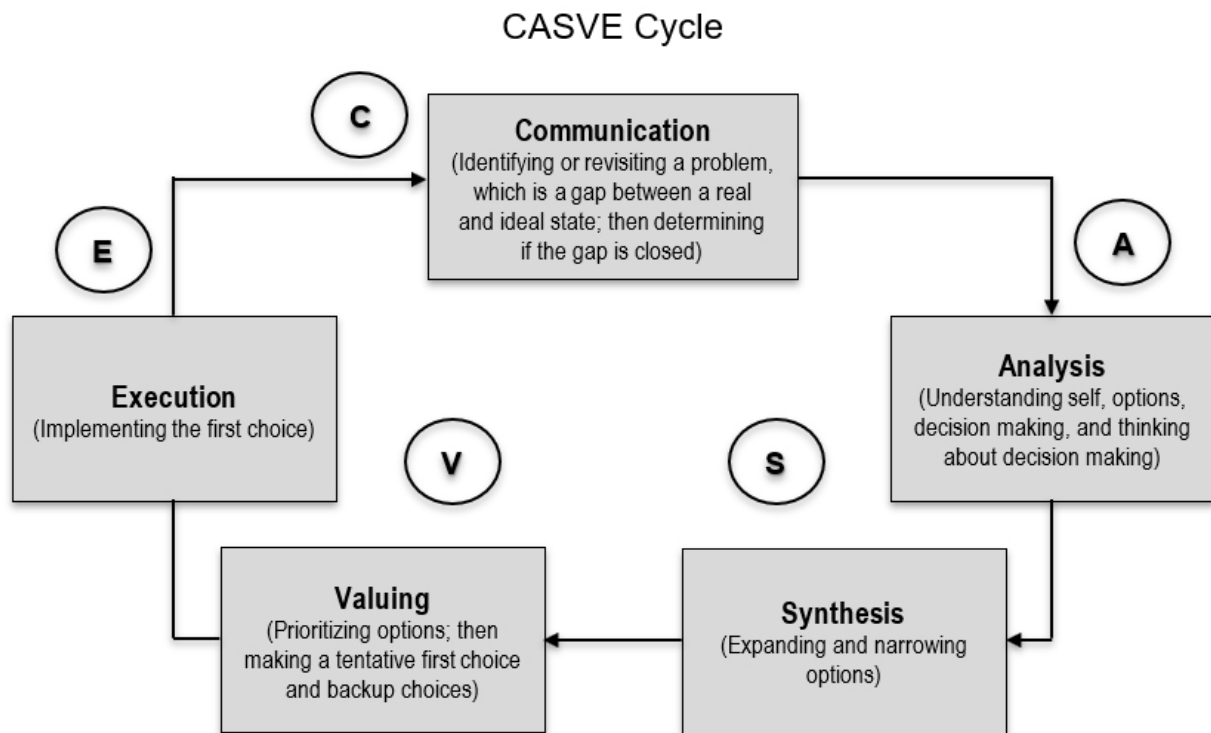
CASVE Cycle

Note. Adapted from *Career counseling and services: A cognitive information processing approach* (p. 26), by J. P. Sampson, R. C. Reardon, G. W. Peterson, and J. G. Lenz, Copyright 2004 by Brooks/Cole with copyright transferred to J. P. Sampson, R. C. Reardon, G. W. Peterson, and J. G. Lenz. Adapted with permission.

Figure 2.4

Client Version of the CASVE Cycle
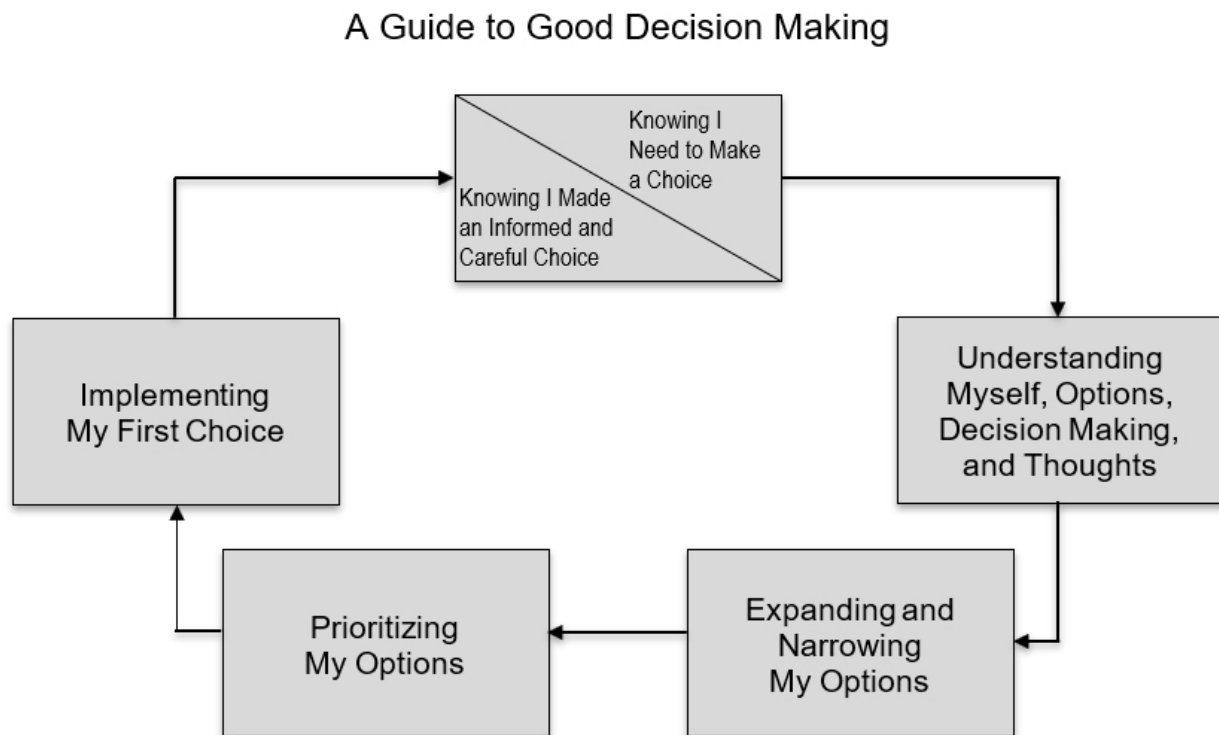
A Guide to Good Decision Making

Note. Adapted from "A cognitive approach to career services: Translating concepts into practice," by J. P. Sampson, G. W. Peterson, J. G. Lenz, and R. C. Reardon, 1992, *The Career Development Quarterly*, *41*(1), p. 70. https://doi.org/10.1002/j.2161-0045.1992.tb00360.x. Copyright 1992 by the National Career Development Association. Adapted with permission.

A resource entitled, "Guide to Good Decision-Making Exercise" is used in the FSU Career Center to help persons apply CIP theory concepts to their specific career decision and is included in Appendix A. The link to all client resources is available at: http://www.career.fsu.edu/tech-center/resources/service-delivery-handouts. CIP-based interventions, such as career courses (Osborn et al., 2020), computer-assisted career guidance systems (Osborn et al., 2021), and CIP-based career counseling groups (Leuty et al., 2015) have been shown to be effective in increasing career decision-making skills and efficacy. In addition, as clients proceed through the CASVE cycle, they may become aware of a need for specific activities and resources to help them in that phase. For example, to help organize information in the Analysis and Synthesis-Crystallization phase, a client may need to complete an interest inventory or computer-assisted career guidance program. If so, clients can be encouraged to create a plan related to their career choice that outlines specific tasks and resources needed, such as the Individual Learning Plan, described in Chapter 7. The following section begins with an examination of the Communication phase, followed by phases for Analysis, Synthesis, Valuing, and Execution. The section ends with a return to the Communication phase.

Communication or "Knowing I Need to Make a Choice"

In the *Communication* phase, individuals become aware that a gap exists between an existing and a desired state of affairs, or where they are and where they want to be. Pretz et al. (2003) emphasized that the process includes both identifying the problem in the beginning and circling back to check it for accuracy at the end, much like the two communication phases in the CASVE cycle. This awareness of the gap results from one or more external or internal cues. *External* cues may include positive or negative events that occur or input from one or more significant others. *Internal* cues may include persons' perceptions of negative emotions, avoidance behavior, or physiological changes. Persons' growing awareness of a gap creates a tension that stimulates individuals to engage in career problem solving and decision-making. It may also provide the motivation necessary for seeking career services. Persons generally seek assistance with a career problem when the discomfort they feel becomes greater than their fear of change. Persons also seek assistance when their existing support resources are inadequate to help them solve their problem. Persons' reasons for seeking help are often clarified in the initial stage of career assistance. Persons also become aware of factors related to the gap in the problem space (i.e., the complexity of the decision they are making).

Analysis or "Understanding Myself, My Options, Decision-making & Thoughts"

In the *Analysis* phase, persons establish a mental model of the problem and perceive the relationships among the components. The process includes pausing before fully engaging the problem-solving process to clarify their self-knowledge in relation to values, interests, skills, and employment preferences. The process also includes enhancing their knowledge of occupations, programs of study, or jobs (Pretz et al., 2003). Career assessments and career information delivery systems, as well as personal experience and input from significant others, can be used to inform this type of analysis. In this phase, persons may relate self-knowledge with options knowledge to better understand their personal characteristics in relation to the nature of the occupation or other option they are considering. Persons may also clarify how they typically approach problem solving and decision-making, as well as clarify how their positive or negative self-talk influences the choice process. In addition, persons may gain an understanding of how decision-making style influences their approach to career problem solving and acquire a deeper understanding of the nature of their career problem. Important during this phase is considering the impact of individual and intersecting identities (e.g., ethnicity, socio-economic, gender, sexual orientation), culture, and past experiences on the decision-making process. During the Analysis phase, persons engage in a recurring process of clarifying existing knowledge or obtaining new information, followed by time to reflect on and integrate what has been learned, leading to new or more complex mental models. In almost all cases, persons are adding to existing knowledge about themselves and their options. Stereotypes that restrict problem solving can be identified and potentially reframed during this phase.

Synthesis or "Expanding and Narrowing my List of Options"

In the *Synthesis* phase, persons expand and narrow the options they are considering. Fischer et al. (2012) noted the importance of any problem-solving process including both the expanding and then reduction aspects of options, akin to the Synthesis phase. The goal of the Synthesis phase is to avoid missing alternatives while not becoming overwhelmed with options. The two phases of Synthesis are elaboration and crystallization. *Elaboration* involves divergent

thinking that frees the mind to create as many potential solutions to a career problem as possible. Many assessment measures and career information delivery systems generate lists of potential occupations or majors based on various combinations of values, interests, skills, and employment preferences. Individuals can also use their personal experience or recommendations from significant others to generate options. Allowing persons time to consider a variety of options without censorship can aid in reviewing their rationale for previous choices or prematurely eliminated options. Some enter the career problem-solving and decision-making process overwhelmed by options. This may indicate to the career practitioner that engaging the elaboration process may be too overwhelming for such clients as they would not benefit from the development of additional options. *Crystallization* involves convergent thinking that reduces a list of alternatives by eliminating options from consideration that are incongruent with the values, interests, skills, and employment preferences of the individual. This process of considering congruency of options would also involve consideration of the person's culture, personal and intersecting identities, and current circumstances. Further review of career assessments and information can assist individuals in narrowing their options. At the conclusion of the crystallization process, persons should have narrowed their options to a manageable number of three to five plausible choices (Sampson et al., 2020a; Shahnasarian & Peterson, 1988; Werner et al., 2021).

Valuing or "Choosing an Occupation, Program of Study, or Job"

In the *Valuing* phase, persons evaluate the costs and benefits of each of the remaining alternatives to themselves and the potential costs and benefits to their significant others (e.g., friends or family members), their cultural group, community, and society in general. Hall and Davis (2007) described the integration of values into the problem-solving process, providing support for the continued integration of the CASVE cycle's Valuing phase. It is important to differentiate CIP theory's concept of values from the act of valuing. Personal values are considered throughout the problem-solving and decision-making process. The CASVE cycle-based Valuing phase reflects a time to put all that information together to determine the costs and benefits of crystalized options. The next step involves prioritizing the alternatives to optimize costs and benefits in relation to the needs of all concerned. After priorities have been established among the three to five options being considered, a tentative primary and secondary choice emerges. Choices at this phase are considered tentative because subsequent preparation, reality testing, or employment seeking may reveal a choice that is unavailable or inappropriate.

Execution or "Implementing My Choice"

In the *Execution* phase, persons establish and commit to a plan of action for implementing their tentative first choice. While most of the CASVE cycle is about problem solving, the Execution phase is about decision-making and acting on the decision (Peterson et al., 1996). Galotti (2019) also makes this distinction between problem solving and decision-making. Within Galotti's model, decision-making is the point in at which you actually make a choice, which is proceeded by the multiple phases of problem solving. The Execution phase is defined as that choice and the external action engaged in by the person. In other words, a perso acts on a choice when executing a decision. This plan may include selecting a preparation program (e.g., planning a program of study, exploring financial aid, or completing a formal education/training experience), reality testing (working full-time, part-time, and/or as a volunteer, as well as taking academic courses or training programs), and employment seeking (taking the steps necessary to

identify, apply for, and get a job). The Execution phase may be completed in a short period of time, as might be the case for an individual making a lateral job change within the same organization. There may be other times when the Execution phase may extend over a period of some years, as would be the case for an adolescent seeking to enter an occupation requiring education in a graduate program.

Communication or "Knowing I Made a Good Choice"

Upon completion of the Execution phase, persons return to the Communication phase to reflect on the process and determine whether or not the gap between the existing and desired state of affairs has been effectively removed. If the problem has been resolved, the problem-solving and decision-making process ends. If the gap has not been removed, if external and internal cues indicate that a problem still exists, or if individuals are not taking action to implement their choice, then the process continues through the CASVE cycle again. If a new problem subsequently becomes apparent, then the process continues through the cycle again. Thus, the CASVE cycle is recursive in nature. Potential outcomes expected from successful decision-making include a reduction in negative career thoughts, reduction in stress response or anxiety, increased satisfaction, increased career decidedness, and increased career decision-making self-efficacy. See Table 2.5 for a summary of the CASVE cycle phases.

Table 2.5

Summary of the CASVE Cycle Phases

Communication (knowing that a choice needs to be made)

- Become aware that a problem exists, which is a *gap* between a real and desired state of affairs or "the difference between where an individual is and where they want to be."
- Become aware of cues that prompted the awareness of a career problem.
- Clarify *external cues* that a problem exists, such as positive or negative *events* that occur or input from one or more *significant others*.
- Clarify *internal cues* that a problem exists, such as perceptions of *negative emotions*, *avoidance behavior* when a problem exists, or *physiological changes*.
- Awareness of a career problem may prompt individuals to engage in the Analysis phase that follows.

Analysis (understanding self and potential options)
- Pause to consider a need to clarify any aspect of the pyramid, including the impact of culture, personal and intersecting identities and current circumstances.
- Clarify *self-knowledge* obtained from educational/training experiences, work experience, feedback from significant others, assessment instruments, and computer-assisted career guidance systems by considering an individual's *values*, *interests*, *skills*, and *employment preferences*.
- Enhance *knowledge of options*
- Identify important *characteristics* of occupations, programs of study, or jobs obtained from sources such as print and multimedia materials, computer-assisted career guidance systems, information interviews, shadowing, work experience, and academic courses.

- Enhance knowledge of the *structure of the world of work* (occupations, programs of study, or jobs) by using an easy-to-understand schema such as the Holland hexagon.
- Engage in a recurring process of clarifying existing knowledge or obtaining new information, then taking time to reflect on what has been learned, leading to a more thorough understanding of self and options being considered.
- Clarify the *process typically used* to make important decisions, including the capacity to apply the CASVE cycle or similar approach.
- Clarify *metacognitions* used in making important decisions, including self-talk, self-awareness, and monitoring and control.
- Clarify *self-talk* related to career problem solving and decision-making ("I always seem to choose a major and then change my mind" is an example of negative self-talk).
- Promote *self-awareness* of the career problem-solving and decision-making process by the individual ("I am getting really stressed about making this choice").
- Enhance *monitoring and control* of the career problem-solving and decision-making process by the individual ("I am not going to gain anything from getting more information about my options; now is the time to make my choice").

Synthesis (expanding and then narrowing a list of options)
- With the insights gained in the Analysis phase, individuals *elaborate* and *crystallize* their occupational, program of study, or employment options.
- *Elaboration* involves generating a variety of occupational, program of study, or employment options that fit with an individual's values, interests, skills, and employment preferences. Assessments, computer-assisted career guidance systems, personal experience, and input from significant others can be used to generate options.
- *Crystallization* involves narrowing occupational, program of study, or employment options by eliminating alternatives that do not fit with the values, interests, skills, employment preferences, culture, and personal and intersecting identities of the individual. Further review of assessments and career information can assist individuals in narrowing down choices to a manageable number of three to five plausible options that are used in the Valuing phase that follows.

Valuing (choosing an occupation, educational or training program, or job)
- With the three to five options identified in the Synthesis phase, individuals judge the relative *costs* and *benefits* of each of the remaining options to themselves and the potential costs and benefits to their significant others (e.g., friends or family members), their cultural group, community, and society in general.
- *Prioritize* the three to five options being considered in terms of optimizing costs and benefits in relation to the needs of those concerned.
- Make a *tentative primary choice*.
- Make a *tentative secondary choice* in case their primary choice becomes inappropriate as a result of reality testing through education/training or work experience or unobtainable due to job market conditions.

Execution (implementing a choice)

- Create and commit to a *plan* of action for implementing the tentative first choice identified in the Valuing phase.
- If needed, select an *education/training program* to implement an occupational choice, then plan a program of study. Financial-aid options can be explored if necessary.
- *Reality-test* an occupational, educational/training, or employment choice by engaging in full-time, part-time, and/or volunteer work experience and taking courses or training.
- *Seek employment* by organizing a job campaign, writing a resume and cover letter, researching specific positions and employers, and preparing for interviews.

Communication (knowing if an informed and careful choice has been made)

- After completing the phases of the CASVE cycle, reflect on the process and determine if the problem has been solved. Has the gap been resolved between where the individual is and where he or she wants to be?
- Determine if the external and internal cues indicate that the problem has been solved.
- Determine if the individual is taking action to implement their choice.
- If the problem still persists or if a new problem becomes apparent, repeat the CASVE cycle.

Cyclical Nature of the CASVE Cycle

The CASVE cycle is a relatively simple schema that is used to describe a complex career problem-solving and decision-making process. A single career decision that evolves over a period of weeks, months, or years may involve numerous iterations of the CASVE cycle. Persons experiencing difficulty in one phase of the cycle would typically cycle through to a previous phase to correct the problem. For example, when persons experience a problem in Valuing, they may cycle through to Analysis again to better understand themselves and their options. A variety of external events (such as another problem or a new opportunity) and personal variables (such as mental health or decision-making style) can influence the speed and the nature of persons' progression through the CASVE cycle. The potential advantage of using this relatively simple and parsimonious schema to represent a complex process is that persons who are anxious and overwhelmed will be more likely to understand and use a simple schema. Additionally, use of the CASVE cycle to address a current career problem will ideally lead to enhanced problem-solving and decision-making skills that can be used in future career decisions.

Serendipity and CIP Theory

As individuals progress through Valuing or Execution, chance factors, or serendipity, can result in the identification of new options that may make it necessary to cycle back through Communication, Analysis, and Valuing. Returning to the Analysis and Valuing phases can provide an opportunity to carefully consider new options in comparison to options previously identified in the crystallization phase of Synthesis.

Using CIP Theory with Other Career Theories & Models

CIP theory is constructed in such a way that it can be used in conjunction with other career theories and models. Sampson et al. (2017) noted the importance of improving "the integration of diverse perspectives into the way we practice, conduct research, and develop theory" (p. 191). Several authors (Arthur & McMahon, 2019; Brown & Lent, 2020; Niles & Bowlsbey, 2021) compare and contrast career theories, including key constructs and assessments, and offer insight into how they can inform practice. This section provides examples of how CIP-based concepts might relate to other career theory perspectives. For an earlier discussion of this topic, see the Peterson et al. (1991) description of how CIP theory could be integrated with trait and factor theory, career decision theory, and the work of Roe and Krumboltz. In Chapter 5 of this book, Reardon and Lenz (2015) provide a more detailed analysis of the integration of Holland's work with CIP theory. They describe how each element of Holland's theory can inform the Pyramid and CASVE cycle.

CIP theory's concept of self-knowledge is associated with a variety of theoretical perspectives. Potential examples of theory integration include (a) Holland's (1997) constructs, measures, and intervention strategies related to interests and self-estimates; (b) social cognitive career theory (SCCT) which "acknowledges the important role that interests, abilities, and values can play within the career development process" (Lent, 2020, p. 131); (c) Super's self-concept theory, which "explains how individuals development ideas about who they are in different roles (Hartung, 2020, p. 100) and additionally recognizes the use of assessment data as a way of categorizing vocational interests, ability, and other traits that form personality" (Hartung, 2020, p. 101); (d) McMahon and Patton's (2019) systems theory of career development, including the individual system which comprises factors such as gender, age, interests, personality, values, and physical attributes; and (e) life design counseling (Savickas, 2012; 2015), which focuses on co-constructing a stable, albeit adaptable identity, examined through narrative methods and stories.

In terms of options knowledge, potential examples of theory integration include: (a) Holland's hexagon construct, along with his measure, the Self-Directed Search assessment, including the Occupations Finder, (b) SCCT's choice model which includes the expression of a primary career choice, while acknowledging that choices are not static but are continuously influenced by changes in the person and the environment; (c) Dawis and Lofquist's theory of work adjustment (TWA; Swanson & Schneider, 2020) which helps individuals determine work environments that would match their characteristics.

With regard to the decision-making skills domain, some theories and models that could provide linkages to CIP theory include: (a) Holland's notion of vocational identity and the My Vocational Situation measure which assesses identity, need for information, and barriers to decision-making; (b) Dawis and Lofquist's TWA theory which outlines several propositions that inform how individuals' make decisions, in terms of staying in or leaving a particular work environment (Woodend, 2019); (c) the differential dimension of life-span, life-space theory (Hartung, 2020) that describes how knowledge related to one's vocational self-concept can be combined with occupational knowledge to promote effective career decision-making; (d) Gati's (1986) sequential elimination approach to decision-making and Gati and Asher's (2001) PIC model for career decision-making that outlines three steps, including prescreening options, in-depth exploration of those options and commitment to a choice.

In terms of the executive processing domain, potential theory integration examples include (a) Holland's construct and measure of vocational identity, (b) SCCT's self-efficacy beliefs and outcome expectations (Lent, 2020), and (c) Krumboltz's (1994) notion of career beliefs that may block an individual's career progress.

A hallmark of CIP theory is its emphasis on readiness for career interventions and career decision-making (Sampson et al., 2020b). The notion of readiness is a concept reflected in a variety of career theories and has resulted in the development of numerous measures designed to assess this construct from a particular theoretical perspective (Sampson, et al., 2013). Hughes and Hyatt (2020) provided an example of how CIP theory's readiness construct and differentiated service delivery model could be integrated with Holland's readiness assessment, My Vocational Situation (MVS) and career construction theory's Career Adapt-Abilities Scale (Porfeli & Savickas, 2012). Bright and Pryor (2019), as part of their chaos theory of careers, developed a Complexity Perception Index (CPI) that assesses individuals' readiness to cope with change, which may impact their readiness to undertake career development tasks.

This section has highlighted how core CIP theory constructs might be integrated with other theoretical perspectives and models. In addition, there are a wide variety of measures described in Chapters 8 and 9 that can be used to help practitioners better understand key client characteristics (e.g., self-knowledge, options knowledge, decision-making styles and capabilities, readiness for career interventions), and assist them in the goal of theory integration.

Potential Misconceptions About CIP Theory

As we have discussed CIP theory with various practitioners and researchers through the years, we have come across a few misperceptions about the theory. In the next section, these criticisms are presented and then addressed from the lens of the philosophy undergirding CIP theory.

"CIP theory emphasizes cognition/thinking over feelings/emotions."

Emotions are just as important as cognitions in decision-making. Cognition allows us to be able to talk about our emotions. We believe that our emotions are influenced by our cognitions and our cognitions are influenced by our emotions, with both influencing our behavior (Sampson et al., 1996a; 1996b). This belief is supported by research (e.g., Hayden & Osborn, 2020) that demonstrates a direct correlation between feelings and cognitions. Although emotions are an important element in each phase of the CASVE cycle, emotions are particularly important in the Communication phase. In the pyramid of information processing domains, negative metacognitions can result in depression and anxiety which, in turn, make it more difficult to clarify the self- and options knowledge needed for career problem solving. Practitioners should pay careful attention to emotions, as this type of affective data is essential to identifying dysfunctional cognitions that may be impeding problem solving and decision-making. It is also important for practitioners to affirm positive emotions (e.g., happiness, hope, confidence) associated with successful problem solving and decision-making. It is worth noting that we use cognition, i.e., our thoughts about our feelings, as a way to describe our emotions so that we can communicate information about our feelings to others, which potentially increases our levels of self-understanding and insight.

"CIP theory is simply a decision-making model with a rational focus that ignores intuition."

We believe that intuition is "a different way of knowing" in comparison with rationality and logic. Intuition includes cognitions outside our immediate conscious awareness. Insights gained from intuition are just as valuable as the insights gained from rationality and logic. Although individuals vary in the extent to which they use rationality and intuition in decision-making, almost everyone uses some degree of both processes. Rationality and intuition are complementary, not exclusive. A perceived discrepancy between conclusions arrived at by rationality and intuition suggests that the person may need to explore this difference before any final decision is made. The use of intuition is particularly valuable in the Communication, Analysis, and Valuing phases of the CASVE cycle. Good career problem solving and decision-making involve both rationality and intuition.

"CIP theory has only been researched/applied at Florida State University (FSU)."

CIP theory and its components (e.g., career thoughts) have been researched and applied beyond FSU. Researchers from University of Southern Mississippi, Wake Forest University, and University of Illinois at Urbana-Champaign have regularly published on CIP theory. In 2022, a count of CIP-focused published articles revealed that 18% were from international authors (Sampson et al., 2022). Numerous international applications of CIP theory were detailed in a special issue of the *Career Planning and Adult Development Journal* (Osborn, 2020). See Chapter 15 in this book for additional information on this topic. To date, visitors from 48 different countries have come to FSU to learn about how to implement CIP theory, and CIP theorists and researchers have presented on CIP theory in 28 different countries.

"CIP theory has not been applied/researched with diverse populations or cultures."

College students have been a main focus of research and application of CIP theory for many reasons. First, they are required to make a commitment to a major or field of study, and many struggle with making that decision. Secondly, colleges and universities provide career development resources to meet that need, and thus require research and evidenced-based interventions. College students come from diverse backgrounds and cultures, with varying gender, ethnic, racial, sexual orientation, and socio-economic identities. In addition to college students, CIP theory has been researched and applied with a variety of populations, including middle school students (Osborn & Reardon, 2006), veterans (Buzzetta et al., 2020), people with disabilities (Dipeolu et al., 2020), LGBT populations (Yoon et al., 2022), breast cancer survivors (Dames et al., 2019), women in lower socioeconomic groups (Keim et al, 2002), female inmates (Railey & Peterson, 2000), and unemployed adults (Bullock-Yowell et al., 2012).

"CIP theory doesn't deal with chance, uncertainty, or unplanned events."

One of the hallmarks of CIP theory is its emphasis on learning and the notion of teaching people to solve career problems and make career decisions throughout their lifetime, as opposed to solely a point in time approach. While the labor market has experienced turmoil throughout the years, the pandemic beginning in 2020 showed how the power of external events can turn peoples' career paths upside down. The CASVE cycle, which is a core construct of CIP theory, is viewed as a means for continually engaging with and solving career problems. The CASVE cycle's Communication phase recognizes that events that are unique to a person, e.g., an injury

prevents them from pursuing their current job, to worldwide events, e.g., the COVID pandemic (Osborn et al., 2022), requires persons to revisit their self and options knowledge, as well as the decision-making process. In addition, uncertainty may impact a persons' thoughts about their career future. As we have seen in the last several years, workers have been in flux and uncertain about the work that they might choose to do in the future. CIP theory provides a means for individuals to incorporate new information from changing circumstances and consider how it re-shapes their pyramid and how they proceed through the CASVE cycle. Reconsidering their situation based on chance events may cause them to have a new perspective in the Analysis phase. Unplanned events, encounters with new types of work (e.g., working remotely) may lead to consideration of new options in Synthesis. Events like the global pandemic may also involve a rethinking of elements of the Valuing phase, e.g., a recognition of the importance of time with family, as opposed to facetime in the office.

"CIP theory focuses solely on the individual, rather than individuals in context."

CIP theory actively seeks to assess and integrate contextual issues. This is most obviously seen in the CASVE cycle, especially in the Communication and Valuing phases, in which individuals are asked to reflect on internal and external cues and considerations from important others in their lives. The career decision-making readiness dimensions of capability and complexity examine what might be currently impacting, both positively and negatively, their ability to engage in the career decision-making process. Assessments associated with CIP theory such as the Career Thoughts Inventory and the Decision Space Worksheet (Peterson et al., 2016) highlight contextual issues that might be salient to the career decision at hand.

Evidence Supporting the Validity of CIP Theory

Over 300 scholarly works have focused on CIP theory (Sampson et al., 2022), with multiple studies providing support for the validity of the various components of CIP theory. Separate studies have shown elements of the pyramid to be independent and yet correlated (Hayden & Osborn, 2020; Osborn et al., 2020, 2021). The role of dysfunctional career thoughts on career decision-making has been the focus of multiple studies (Sampson et al., 2022). Other studies (Werner et al., 2021; Osborn et al., 2020) have examined the CASVE cycle and how clients move through that process. The differentiated service delivery model also has found support (Kronholz, 2015; Osborn et al., 2016). As noted above, CIP theory has been applied and found effective among various populations such as middle school students, people with disabilities (Osborn & Saunders, 2021), veterans (Buzzetta et al., 2017), unemployed individuals (Bullock-Yowell et al., 2014). International applications of CIP theory have been repeatedly reported (e.g., Fairweather et al., 2006; Osborn, 2020, Sampson et al., 2000; Teuscher, 2003). The studies presented in this section are a sample of the evidence supporting CIP theory.

Chapter 2 Summary

This chapter explored the use of theory to improve practice, including benefits for both practitioners and persons seeking career assistance. The translation of concepts in CIP theory for direct use by persons was described. Specific steps to help practitioners apply theory to practice were identified. Constructs from the pyramid of information domains (self-knowledge, options knowledge, decision-making skills, and metacognitions) were explained. The interrelated nature of the domains of the pyramid was acknowledged. Constructs from the CASVE cycle

(Communication, Analysis, Synthesis, Valuing, and Execution) were then explained. Figures showing the practitioner and client versions of the pyramid and the CASVE cycle were included. The use of CIP theory along with other career theories was described along with related examples. Finally, potential misconceptions about CIP theory were identified.

Getting the Most Benefit from Reading Chapter 2

To effectively learn the material in this chapter, complete one or more of the following activities:

- In your own words, list the benefits of using career theory when working with practitioners and clients.

- Write out the terms included in Tables 2.1, 2.2, and 2.3.

- Think about your own career development and use the terms in Table 2.4 to write about your experience or complete the "Guide to Good Decision-making" exercise included in Appendix A.

- Review Table 2.5 and think about how you made your current career choice. How might you have done things differently? What would you do in the same way?

- Describe how CIP theoretical components overlap with other career theories.

- Draw and label Figures 2.1, 2.2, 2.3, and 2.4.

- Consider whether you had any of the misconceptions about CIP theory.

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Appendix A
A Guide to Good Career Decision Making Exercise

From: *Cognitive Information Processing: Career Theory, Research, and Practice*, Chapter 2 (https://doi.org/10.33009/fsop_sampson1123.ch02).

Guide to Good Decision Making Exercise[12]

A cycle can be used to show the steps in making a career choice. Use the blank spaces below to note your thoughts and feelings about your career choice.

Communication
Knowing I Need to Make a Choice

Events - things that happen to me
Example: "I need to choose a major by next semester."

Comments from my friends and relatives
Example: "My roommate said that I'll have problems if I don't make a decision soon."

The way I feel
"I'm scared about committing myself."

Avoiding my problems
"I'll get started next week."

Physical problems
"I'm so upset about this, I can't eat.

Analysis
Understanding Myself, Options, Decision Making, and Thoughts

Understanding myself, such as
My values
Example: security

My interests
Example: working with people

My skills
Example: using a computer to plan a budget

My employment preferences
Example: limited travel

The CASVE Cycle ....

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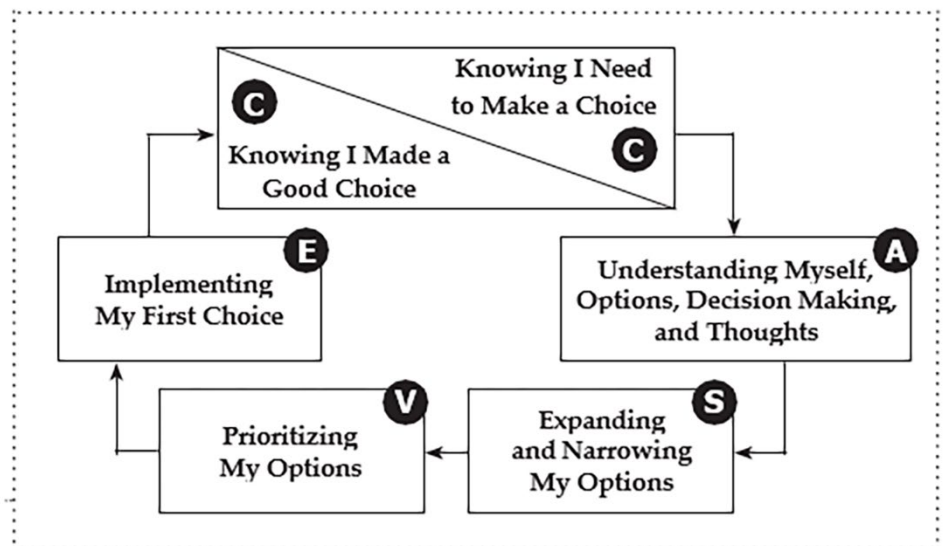
[12] Adapted from Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., & Reardon, R. C. (1992). A cognitive approach to career services: Translating concepts into practice. *The Career Development Quarterly, 41,* 67-74.

Understanding my options
Understanding specific occupations, programs of study, or jobs

Occupation, program of study, or job:

_____

What I know about the occupation, program of study, or job:

Occupation, program of study, or job:

_____

What I know about the occupation, program of study, or job:

Occupation, program of study, or job:

_____

What I know about the occupation, program of study, or job:

Occupation, program of study, or job:

_____

What I know about the occupation, program of study, or job:

Occupation, program of study, or job:

_____

What I know about the occupation, program of study, or job:

Occupation, program of study, or job:

_____

What I know about the occupation, program of study, or job:

Occupation, program of study, or job:

_____

What I know about the occupation, program of study, or job:

Occupation, program of study, or job:

_____

What I know about the occupation, program of study, or job:

Understanding how occupations, programs of study, or jobs are organized
Example:
Realistic Occupations
Investigative Occupations
Artistic Occupations Social
Occupations Enterprising
Occupations Conventional
Occupations

Understanding how I make important decisions Self-talk
Example: Thinking, feeling, and/or getting advice from others

Understanding thoughts related to my decisions Self-talk
Example: "I'll never be able to make a good career choice."

Self-awareness
Example: "I'm getting very scared about this."

Monitoring and controlling my self-talk
Example: "I can't really predict the future and imagining failure is not going to help me find a good job.

Synthesis
Expanding and Narrowing My Options

Identify occupations, programs of study, or jobs that fit my values, interests, and skills.

Pick the 3 to 5 best occupations, programs of study, or jobs using what I learned from "Understanding Myself and My Options."

1) _____

2) _____

3) _____

4) _____

5) _____

Valuing
Prioritizing My Options

Occupation, program of study, or job	**Benefits** to myself? My family? Friends? Cultural group? Community? Society?	**Costs** to myself? My family? Friends? Cultural group? Community? Society?

Prioritize my occupations, programs of study, or jobs

1st _____   4th _____

2nd _____   5th _____

3rd _____

My first choice:

_____

My back-up choice(s):

_____

_____

Execution
Implementing My First Choice

(Complete the sections below that apply to you)

Plan - My plan for getting education or training

1)

2)

3)

4)

Try Out - Get experience (full time, part-time, volunteer) and take courses or get training to test my choice

Apply - Steps to apply for and get a job or pursue further education

1)

2)

3)

4)

5)

Communication
Knowing I Made a Good Choice

Have events changed?

How did my family and friends react to my choice?

How do I feel now?

Am I avoiding doing what needs to be done?

Am I satisfied with my choice?

Am I confident with my choice?

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CHAPTER 3
HELPING PERSONS MAKE EMPLOYMENT CHOICES[13]

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This chapter explains how two core constructs of cognitive information processing (CIP) theory can be used to help persons make decisions about employment. After reviewing this chapter, the reader should understand how practitioners and persons seeking career assistance could apply CIP theory to employment choices. The chapter begins with a general discussion of

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[13] Content in this chapter was used or adapted from Sampson et al. (1999; 2004). Used or adapted with permission.

employment decision-making and continues with an examination of the nature of employment problems, the pyramid of information processing domains, and readiness to benefit from employment assistance. To clarify the meaning of these concepts, a case study is then presented, followed by a chapter summary and strategies for getting the most benefit from the chapter.

Making Employment Choices

This chapter uses the perspectives of CIP theory to inform practitioners who are helping persons make employment choices. As we stated in Chapter 1, an *employment decision* typically involves choosing and applying for a position with an employer in an industry that is in a sector of the economy. Most employment decisions are both the ultimate outcome of career decision-making and the starting point for further choices about occupations, education, training, and employment. One employment decision typically leads to a sequence of future decisions that continue through retirement. Ongoing events related to the pandemic (e.g., long-term COVID) and climate change (loss of livelihoods in certain regions around the world) reinforce the notion that employment decision-making and problem solving will be an ongoing challenge for many individuals.

The Nature of Employment Problems

As stated previously, a *problem* is defined as a gap between an existing and a desired state of affairs. Or stated more simply, a gap is the difference between where a person is and where they want to be. The following are examples of gap statements for persons who might be seeking employment.

- "Now that I am about to finish school, I am need to get a job."
- "I have two job offers and need to decide which one to take."
- "This job is not leading anywhere. I need to find an employer who will give me the opportunity to further advance within the organization."
- "I prefer to stay home with my children and want to find ways to work remotely in a field that fits my career interests."
- "My company has been sold, and my job was eliminated in the downsizing. I need a job to survive. What am I going to do?"
- "I retire soon, but I don't want to just sit around the house. I want to find a part-time job where I can be useful, but also earn money to help me in retirement."

Problem solving involves individuals acquiring information and learning cognitive strategies that enable them to remove the gap between their existing and desired state of affairs. The outcome of the problem-solving process is a choice that has a reasonable probability for narrowing the gap between where a person is and where they want to be. *Decision making* involves transforming the choice into specific action steps (Peterson et al., 1991; Sampson et al., 2020). Both processes are needed to make effective employment decisions. An *employment choice* is an outcome of the employment problem-solving process, and *taking action* is a result of the decision-making process. Taking action requires making a commitment to follow through with a choice.

As we noted above, many individuals have had their employment situations greatly disrupted by recent events. In some cases, the "great resignation" (Chen, 2022) brought on by the pandemic, has created more attractive alternatives for individuals seeking new employment

opportunities. For others, there continues to be a great deal of uncertainty associated with employment and these individuals may find their options limited to what has been called "precarious work" (Blustein, 2019; Blustein et al., 2020), which often comes with little or no job security, low wages, and few to no benefits. Some job seekers may encounter discrimination in seeking work, and face barriers due to immigration status, age, disability, sexual orientation, and related factors. Practitioners must be mindful of the challenges that job seekers face as they navigate making employment choices. We believe that a CIP theory-based approach can still be effectively used with the vast majority of job seekers who present themselves for assistance in school-based, community, and government agency settings.

The following section explains how CIP theory's pyramid of information processing domains and the CASVE cycle can be used to explain the vocational behavior of persons seeking and securing employment, as well as provide the foundation for delivering services to persons seeking assistance with employment problems.

The Pyramid of Information Processing Domains (Including the CASVE Cycle)

The pyramid of information processing domains shown in Figure 3.1 depicts the content of employment problem solving and decision-making (Peterson et al., 1991; Sampson et al., 2004; Sampson, et al., 2020; Sampson, et al., 2023). The base of the pyramid is concerned with what persons know about themselves and their employment options. The midlevel of the pyramid involves the process persons might typically use in solving important problems. The top of the pyramid is concerned with how thinking influences the way persons solve employment problems. These thoughts (positive or negative) influence both how individuals go about problem solving and decision-making and what they think about themselves and their options. The next section describes the *content* of employment problem solving and decision-making-- that is, what individuals need to *know*.

Figure 3.1

Client and Practitioner Version of the Pyramid of Information Processing Domains
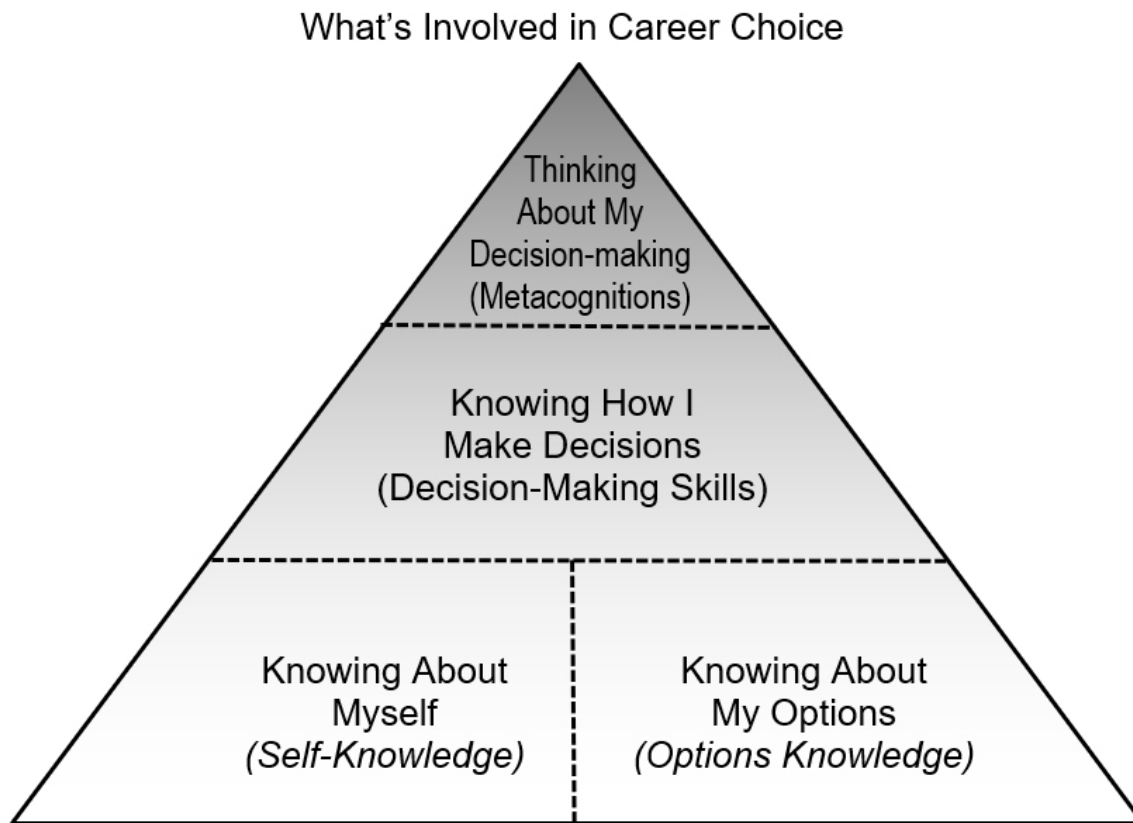
What's Involved in Career Choice

Thinking
About My
Decision-making
(Metacognitions)

Knowing How I
Make Decisions
(Decision-Making Skills)

Knowing About
Myself
(Self-Knowledge)

Knowing About
My Options
(Options Knowledge)

What you need to *know* to make an *informed* and *careful* career choice

Note. Adapted from "A cognitive approach to career services: Translating concepts into practice," by J. P. Sampson, G. W. Peterson, J. G. Lenz, and R. C. Reardon, 1992, *The Career Development Quarterly*, *41*(1), p. 70. https://doi.org/10.1002/j.2161-0045.1992.tb00360.x. Copyright 1992 by the National Career Development Association. Adapted with permission.

Self-Knowledge

As discussed in Chapter 2, self-knowledge, as a theoretical construct, addresses the fundamental question, "Who am I?" The self-knowledge necessary to make an employment choice is similar to the knowledge necessary to make other types of career choices (Peterson et al., 1991; Sampson et al., 2020). Moreover, as a construct in making employment decisions, self-knowledge is developed through integration of two principal sources (Tulving, 1972), (a) generalizations from life experiences (episodic memory), and (b) information obtained from psychological measures such as interest, personality, and values inventories, aptitude, and abilities tests (semantic memory). In addition, job seekers learn about employment options through reviewing job listings, networking with family and friends, accessing employer web sites, and interacting with employers through in-person and virtual events (Hoover et al., 2013). Individuals apply knowledge gained from these sources as they integrate the dimensions of self-

knowledge e.g., values, interests, skills, and employment preferences with employment options. In making employment decisions, the clarity of these dimensions is critical in the weighing of a set of options one is considering with an eye toward making a satisfying and meaningful employment decision. Individuals can also apply the values, interests, skills, and employment preferences that they consider in making general occupational choices to a more specific employment choice.

Values

Values are more enduring aspects of personality that are typically acquired early in life and have a bearing on motivation to perform the work of a particular job, and whether individuals respond positively to work environments (Rokeach, 1973). Clarifying *values* in the job search process with instruments (e.g., Work Values Inventory), card sorts (e.g., Knowdell Career Values Card Sort), computer-based guidance systems (e.g., SIGI3), and similar exercises can help individuals identify job targets and potential employers that match their important *values*. Clarifying values also helps persons identify specific positions that are likely to satisfy their values. For example, assume that a person values independence and variety. The person's employer research (recruitment literature, employer websites, networking, and interviews) may indicate that a potential employer the person is considering generally encourages independence in making decisions as a method to increase quick responsiveness to customer needs. The specific description for management trainee also indicates that considerable variety is included in the position. The person's self-knowledge and the knowledge gained about a specific employer confirm that this employer is potentially a good match for the person's values and should be targeted in the job search process.

Interests

Another important component of self-knowledge is *interests*. In the job search process, having persons clarify their interests with instruments (e.g., Self-Directed Search; https://self-directed-search.com/), card sorts (e.g., Knowdell Occupational Interests Card Sort) and similar activities can help them identify job targets or specific positions where they can be involved in activities they enjoy. Information from inventories can be used to identify occupations for possible consideration when exploring initial employment options, a major shift in employment, as well as for potential job changes within organizations that would entail new responsibilities, duties and tasks. In addition to the results of interest inventories, a review of educational, experiences, past work experiences (both paid and unpaid), and leisure activities can be important in identifying and confirming one's likes and dislikes with respect to employment options under consideration. An additional, more informal activity that may be useful, is to simply review lists of career fields or career clusters (https://careertech.org/career-clusters), job families or industries to determine which ones sound interesting (Bolles & Brooks, 2021). Researching the specific employment options under consideration using sources detailed in this chapter's options knowledge section and in chapter 2 can further clarify interests. All of these information sources are integrated to enhance and clarify the interests' component of a person's self-knowledge, which is vital in addressing the question, "Will I like or even enjoy the responsibilities, activities, duties, and tasks of a given occupation, job, or position I am considering?"

Skills

In CIP theory, as well as in many popular job search strategies, clarifying one's *skills* with instruments (https://www.careeronestop.org/ExploreCareers/Assessments/skills.aspx), card sorts (e.g., Knowdell Motivated Skills Card Sort), and exercises helps individuals identify types of jobs or specific positions where they will have the opportunity to competently complete specific work tasks assigned to a particular position. It should be noted that a variety of terms have been used to define skills including abilities, talents, and competencies. In addition, some sources distinguish between job-specific skills, such as repairing machinery, writing computer code, etc., and what are often called transferable skills, which include such things as written and verbal communication, leadership, teamwork, and problem solving. The National Association of Colleges and Employers (https://www.naceweb.org/career-readiness/competencies/career-readiness-defined/) has identified competencies employers seek across different fields of work, including communication, critical thinking/problem-solving, teamwork/collaboration, professionalism/work ethic, leadership, career management, digital technology, and global/intercultural fluency. Both job specific skills and transferable skills or competencies may be learned through formal training, life experiences, as well as on-the-job. Some jobs may require an applicant to have the skills needed for a position, prior to being hired, e.g., certification in computer programming. For applicants seeking employment, they must ask themselves if they have both the job specific skills, as well as more general skills needed, e.g., communication skills, to be successful in a particular position. For many job seekers, skill identification can be accomplished using a variety of online tools, but some individuals, who lack confidence or view themselves negatively, can benefit from a career practitioner's assistance in identifying and then documenting skills on job search documents, e.g., resumes, cover letters, application forms.

Meaning and Calling

Prior to leaving topic of self-knowledge within the context of CIP theory, we want to briefly mention the notion of finding meaning in one's work (this can include paid and unpaid work) or similarly, finding one's calling (Dik et al., 2015). Sometimes on their career journey, individuals experience discontent, boredom, ennui, and lack of involvement in their current employment situation. These feelings may lead to a persistent question, "While I am dissatisfied with parts of my job, something is missing, but I am unable to put my finger on why." Such a question could signal a crisis in meaning in one's work. As appropriate to the situation, exploring the constructs of meaning and calling with clients may produce important information that can inform their employment search. Recently, a theory of vocational meaning has been advanced by CIP researchers, the hierarchical model of vocational meaning (HMVM, Peterson et al., 2017; 2020), in which four sources of meaning are portrayed in the form of a triangle with *Basic Needs* at the base*, Self Enhancement* above it, followed by *Team Enhancement*, and *Transcendence* at the apex. This topic and the related measures are discussed further in Chapter 21 as one of the future directions of CIP theory.

Reevaluating Values, Interests, and Skills

Reviewing employer recruitment information, position listings, and participating in job interviews can also influence persons' perceptions of their values, interests, and skills. As a result of new information, individuals may reconsider the relative importance of specific values,

interests, and skills. For example, as individuals become more aware of the opportunity to develop diverse skills in a management trainee position, they may then be willing to forgo the higher salary offered for a position that provides less opportunity to develop skills. Individuals may also misunderstand the nature of a particular value, interest, or skill. For example, reviewing employer recruitment information and participating in the job interview process may clarify that the value of independence is often associated with assuming considerable responsibility for success or failure in a job. The individual may decide that the benefit of limited supervision offered by jobs characterized by high independence is not worth the increased responsibility for success and failure in assigned responsibilities.

Employment Preferences

Persons with greater access to employment options may find that their *employment preferences* and *family situation* shape their employment choices. Potential *employment preferences* include such factors as desired salary level, commuting time, physical demands, environmental conditions of work, hours of work, travel requirements, and related items. Clarification of employment preferences may occur as a result of reviewing occupational information and position descriptions and reflecting on past paid and unpaid work experience. For example, an individual might imagine what it would be like to work long hours (including holidays) after reading an occupational description and conducting an information interview with a retail store manager. The individual may remember how working long and irregular hours in a summer job influenced their lifestyle and choose to seek employment opportunities that allow more time with family.

Family Situation

An individual's family situation may also influence an employment choice. Potential *family situations* include the desire to live close to family members; child and eldercare needs that might necessitate options for flexible work; the employment opportunities for a spouse, fiancée, or partner; the preferences (or bias) of family members; family employment contacts; or the existence of a family business. Persons may need to clarify their family situation as it relates to their job search by communicating honestly with significant others and then reflecting on what has been learned. For example, before accepting a promotion that would involve relocation, some persons might view it important to consider the potential impact of such a decision on their spouse, children, and parents. For some cultural groups, it may be very important to include family members in the employment problem-solving and decision-making process. Practitioners can help persons who are seeking to balance their desire for family input with their own needs, goals, and preferences. This includes being alert to signs that a person's excessive dependence on one or more family members for guidance in the job search process is contributing to the person's indecisiveness or their pursuit of an artificially restricted range of options (e.g., "My family says I shouldn't apply for any social services jobs because I'll never make enough money to support myself"). In some cases, it may be appropriate to use family counseling to help individuals who are struggling with their employment search due to conflicting values and goals. The Valuing phase, described later in this chapter is an important aspect of clarifying individuals' family situation.

Knowledge of Employment Options

The knowledge of employment options necessary to make an appropriate employment choice is similar to the knowledge necessary to make an appropriate occupational choice (Sampson, et al., 2004; Sampson et al., 2020). Knowledge of specific occupations and of occupational classifications that are used by persons in making general occupational choices can also be applied to making more specific employment choices.

Knowledge of Specific Industries, Employers, and Employment Positions

Although many career services offices maintain occupational information resources, those sources do not always contain employment information. In addition, access to career services and information resources may vary greatly across countries and cultures (Yoon, 2018). In a CIP theory-based approach to employment problem solving and decision-making, knowledge about options includes knowledge about occupations, types of jobs within a particular field or industry, and specific employers and positions within various types of organizations. An instrument like the Career State Inventory (CSI; Leierer, et al., 2022) could be used to gain some insight into how an individual views their options in the moment. Persons should be encouraged to briefly review occupational information prior to reviewing the information available for a specific employment position. In essence, occupational information provides the foundation for using employment information. By being familiar with the typical work tasks for particular occupations, job hunters are better prepared to research specific employers and positions. O*NET and the Occupational Outlook Handbook are useful sources for this type of information. This strategy has the potential advantages of helping applicants clarify missing or conflicting data in employer information, to ask more-focused questions in employment interviews, and to demonstrate to interviewers that they have the skills needed for the position.

Many of the categories used in describing specific occupations also relate to specific positions, such as salary, education and training required, and physical demands. In addition, job seekers should try to learn about an organization's culture (Rozen, 2017), which includes expressed and hidden values, expectations, and rules for how employees interact and behave. Information about the organization's culture can be more nuanced and difficult to locate. Searching organizational websites and social media sites for specific employment or occupational information can uncover insider feedback from previous and current employees and supervisors, and provide insights into an organization's culture, values, priorities and how they respond to current issues such as the pandemic and social justice concerns. For example, how quick, innovative, and nimble are they in their responses to crises? Considering issues such as a pandemic, were they able to shift their model of work to hybrid or online? How did they flex with, and support their employees who experienced sometimes multiple shifts in family responsibility demands, such as caring for dependents amidst quarantine mandates, while simultaneously trying to meet work demands? What is their reputation for hiring, valuing, and promoting individuals from marginalized groups? While this information is unlikely to be posted on an organizational website, job seekers may find this insider information on employer reviewer sites such as glassdoor.com.

As noted above, online occupational databases, such as O*NET (https://www.onetonline.org/) and the *Occupational Outlook Handbook* (https://www.bls.gov/ooh/) provide detailed information on common tasks for specific occupations, as well as typical employers. Persons should also be encouraged to use various

sources of information, including employer directories, recruitment information (text materials, videos, employer social media, and websites), official position descriptions, and information interviews to enable them to identify options that best match their values, interests, skills, and employment preferences. When it is possible, based on available resources, individuals researching employers should evaluate the quality of the information (Sampson et al., 2018) by considering whether the information is biased, current, and so forth. In addition, practitioners who are assisting users of job listing sites should alert them to potential job scams and refer them to resources on this topic, e.g., https://consumer.ftc.gov/articles/job-scams; https://www.indeed.com/career-advice/finding-a-job/how-to-know-if-a-job-is-a-scam

Knowledge of Employer Classifications

Employer classification schemata can help individuals more quickly find and organize the information they need. Industries and sectors can be organized in a variety of ways, such as by product or service provided (e.g., construction or food), or by economy (e.g., manufacturing, service, or knowledge). Industries can be grouped into the 20 sectors of the *North American Industry Classification System* (NAICS; U.S. Census Bureau, 2022). Utilities, retail trade, and information are examples of NAICS sectors. This information can be used to expand one's list of potential types of employers for further research (synthesis-elaboration). For example, a keyword search of "retail" in the NAICS database yields several specific industries. When one specific industry is chosen, such as "art dealer," a description is given of the industry and cross-references of establishments who engage primarily in those types of activities are provided. Instead of being overwhelmed with numerous specific options, individuals can organize their search by identifying general industries and employing organizations via a manageable number of categories. Individuals may also narrow their searches for employers and industries within particular geographic areas by using chamber of commerce directories (https://www.uschamber.com/co/chambers) for those areas (synthesis-crystallization).

Knowledge About Decision-Making (the CASVE Cycle)

As noted earlier, the midlevel of the pyramid of information processing domains includes a problem-solving and decision-making process known as the CASVE cycle, as shown in Figure 3.2. The CASVE cycle is reviewed as a resource for helping individuals obtain and use the right information at the right time in the employment problem-solving and decision-making process. Although the CASVE cycle represents a "generic" decision-making process (Peterson et al., 1991; Bullock et al., 2015; Sampson et al., 2020), it can be easily applied to the job search process. The CASVE cycle depicts the *process* for obtaining employment--that is, what individuals need to *do* to become employed. It is important to note that the CASVE cycle process may be revisited several times during a person's job search, such as during the initial stages of determining appropriate job targets, during a person's focus on specific positions or openings for which they are applying, and during the stage of negotiating and evaluating offers when the person is trying to decide which offer to accept. Use of the CASVE cycle is also intended to enhance the overall career problem-solving and decision-making skills of job seekers so that these improved skills can be utilized in what are inevitable future employment choices.

Figure 3.2

Client and Practitioner Version of the CASVE Cycle
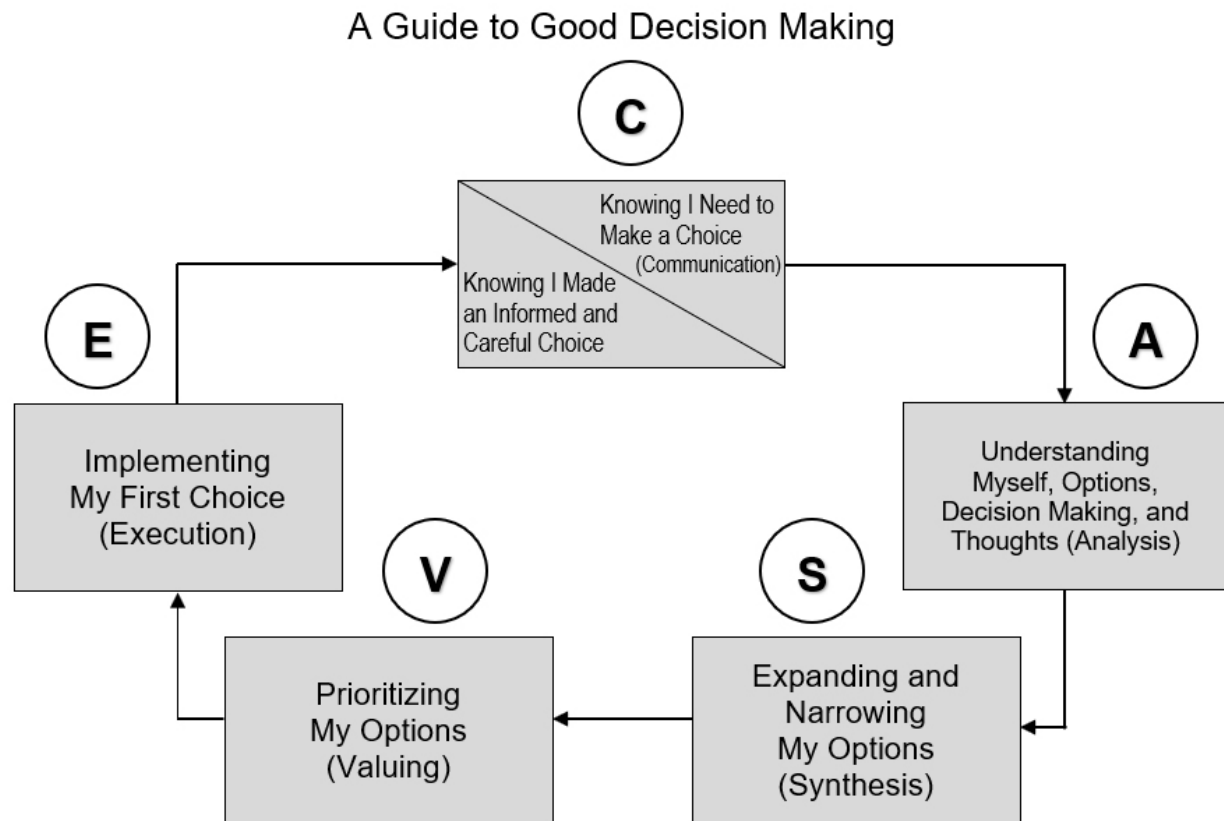
A Guide to Good Decision Making

Note. Adapted from "A cognitive approach to career services: Translating concepts into practice," by J. P. Sampson, G. W. Peterson, J. G. Lenz, and R. C. Reardon, 1992, *The Career Development Quarterly*, *41*(1), p. 70. https://doi.org/10.1002/j.2161-0045.1992.tb00360.x. Copyright 1992 by the National Career Development Association. Adapted with permission.

Communication

In the Communication phase, persons become aware that they need to make an employment decision. Internal cues (such as anxiety) or external cues (such as statements from close friends, the impending completion of a training program or degree, a job loss due to economic setbacks, or a request from an employer that an offer be accepted or rejected by a certain date) signal that employment problem solving and decision-making needs to begin. Internal and external cues create pressure for change. Although some pressure from cues is typically needed to encourage persons to initiate change, too much pressure may cause individuals to procrastinate or engage in negative thinking which can result in a failure to engage with the employment-seeking process. For example, anxiety ("How am I going to pay my student loans if I don't get a job?" or "What if I turn this employer's offer down and I don't get another one?") or recommendations from significant others ("Why not take a sure thing and accept our family friend's offer of a position?") may be motivational in small amounts, but in

large amounts may also lead to procrastination as a defense. Being fired from a job could lead to negative thinking about one's ability to be successful and lead to an emotional state (e.g., anger, depression) that interferes with effective employment-seeking behaviors. Responding to internal and external cues at the appropriate time generally offers the best chance of initiating successful employment problem solving and decision-making.

Analysis

In the Analysis phase, persons pause to assure they have all the knowledge and skills needed to successfully navigate the problem-solving and decision-making process. They use employment self-knowledge and knowledge of employment options to better understand the gap between where they are and where they want to be. As stated earlier, employment self-knowledge includes values, interests, skills, and employment preferences. In addition, as noted in Chapter 2, the impact of individual and intersecting identities (e.g., ethnicity, socio-economic, gender, sexual orientation), and culture may be an important consideration in the employment decision-making process.

Having clear and adequate self-knowledge is critical to effectively evaluate job options in various phases of the CASVE cycle, particularly Synthesis and Valuing. Knowledge of employment options includes knowledge of specific employers, types of jobs, specific position openings, and employer classifications. This type of knowledge is especially critical in evaluating specific job offers. In some cases, persons accept job offers on the basis of limited information gained through brief interviews and short on-site visits, only to find several weeks or months later that the job does not meet their initial expectations, or, in a worst-case scenario, requires them to engage in unethical or illegal behavior. In the Analysis phase, practitioners can also encourage persons to consider their typical approach to making important decisions and to understand how their positive and negative thoughts influence employment problem solving and decision-making. Self-assessment activities and information resources (self-help or provided by a practitioner) may help persons further clarify what they know about themselves and their options. The Analysis phase can be viewed as an ongoing process, where persons reflect on what they know, obtain information, and reflect on what has been learned.

Synthesis

In the *Synthesis* phase, persons typically expand and narrow the employment options they are considering. The goal is to avoid missing potentially appropriate options (expansion or elaboration) while reducing the number of options to a list small enough that persons avoid being overwhelmed when a choice is finally made (narrowing or crystallization). Persons who are going through the CASVE cycle for the purpose of deciding between or among job offers may actually be dealing with a fairly small number of options.

For many persons, however, expanding options are the concern. These persons seek assistance, saying things such as "What else could I do with my major besides teach?" or "I've worked as a sales representative for 10 years but want to start looking for other types of jobs." Persons could explore various methods for expanding their employment options. First, they might begin by using some of the self-knowledge tools (e.g., inventories, computer-assisted career guidance systems) described above to generate occupational alternatives that could also be used to search for related job positions. Second, they could use an information resource to generate options (such as print or Internet directories, company databases, e.g., CareerShift, or

web-based job sites, e.g., [Indeed]). Third, they could be asked to generate a list of potential employers and positions they have considered in the past (similar to their occupational daydreams or aspirations) or even positions they have actually applied for in their current or previous search. To narrow their options, persons would apply what was learned in the Analysis phase. From a CIP theoretical perspective, they would likely keep as choices only those employers and positions that offer a reasonable chance of helping them eliminate their "employment gap." If none of the options identified provide them with a reasonable chance of eliminating the gap, they may need to expand the number of potential employers or types of positions they are considering or reconsider what is really most important in terms of their criteria for acceptable employment. It should be noted that in some places across the globe persons face extremely limited employment prospects or decent work options (Blustein, 2019) including ones that have little to do with their values, interests, and skills, and simply offer a means to support their family and meet basic life needs. Despite these ongoing global challenges, for many job seekers, the outcome of the Synthesis phase is a short list of employment prospects.

Valuing

In the Valuing phase, persons are encouraged to prioritize their employment options. Ideally, this involves careful consideration of self-knowledge in relation to the options under consideration. For example, an optimal use of values considerations is after individuals have identified 3-5 priority options in the Synthesis phase. In Valuing, they can evaluate each employment option in terms of how each choice offers an environment that enhances the opportunity for the realization of their values, interests, skills, and employment preferences. Such information can help individuals prioritize their job options and determine a first choice to implement in the CASVE cycle's Execution phase.

For some persons, the Valuing phase means specifying the job areas they plan to target. For others, it might involve specific positions for which they wish to apply. For still others, this phase involves weighing the pros and cons of specific offers, accepting an employment offer, and beginning work. Persons may consider the costs and benefits of each option to themselves and significant others, such as family. Some individuals may also consider the costs and benefits for their cultural group, community, and society at large. Persons may also want to consider the extent to which a potential work setting has been supportive of diverse gender identities (Schweitzer, et al., 2019). After considering the costs and benefits, persons typically prioritize their options. For instance, in the case of job targets, they may decide, after considering many different areas, that account executive, sales manager, and customer support representative are their three top positions. Other persons, after reviewing multiple position announcements with varied types of employers, may identify those options for which they wish to actually apply. Other job seekers may use the Valuing process to decide between competing offers, including a scenario that would involve declining one or more offers because they do not appear to be a good match and continuing the job search for a more appropriate employment offer. If persons choose to continue seeking employment options, they would likely return to the Analysis phase to further examine the nature of the employment problem and to generate a new list of options in the Synthesis phase. Being discouraged or perceiving barriers to employment may cause persons to cycle through to the Communication phase to better understand the nature of their employment situation.

Execution

In the Execution phase, persons take steps to act on their priority list of options in the Valuing phase. This could include identifying specific organizations where they will send their resumes or informing an employer that a position offer has been accepted (this may first be done verbally, followed by a written acceptance in the form of a letter or e-mail) and, if multiple employment offers exist, declining the other offers in writing. Other steps might include planning for a transition to new employment. Potential transition issues include relocation, spouse or partner employment, and acquisition of necessary tools and working clothes. The final step involves actually beginning employment or starting an employer-delivered training program.

Communication

The final phase involves a return to *Communication* to reflect on the process and determine if internal and external cues indicate whether or not the original employment gap has been successfully closed. If the cues indicate appropriate employment, then the problem-solving and decision-making process pauses until the next gap is identified in the future. If the cues indicate that the problem still persists (such as the individual does not like an employer training program or the employer withdraws an offer because of a downturn in the economy), then the cycle proceeds to the Analysis phase to better understand the gap and ultimately choose another position or employer. Indications that the gap has not been closed, even when action has been taken, include continued negative career thoughts, physiologically manifested signs of stress (e.g., sleeplessness, stomach upset), anxiety, or dissatisfaction with current choice situation.

Understanding How Thoughts Influence Decisions

At the top of the pyramid of information processing domains, shown in Figure 3.1 presented earlier, is the executive processing domain. From a CIP theoretical perspective, the metacognitive skills in this domain influence how individuals think and subsequently act in solving employment problems. The three components of this domain are self-talk, self-awareness, and control and monitoring (Peterson et al., 1991, 2002; Sampson et al., 2004, 2020, 2023).

Self-talk

Self-talk can be described as the silent conversations persons have with themselves about their past, present, and future ability to complete a specific task, in this case employment problem solving and decision-making. Positive self-talk can help individuals (a) remain motivated when delays occur in obtaining employment, (b) actively seek the employment information needed to make a decision, (c) stay focused on making a good employment choice and avoid being distracted, (d) think clearly and realistically about the good and bad points of employment options, (e) make better use of the opinions of important people in their lives, (f) seek job search assistance when needed, and (g) follow through with an action plan after a decision is made. In terms of employment problem solving and decision-making, negative self-talk generally makes it more difficult for persons to (a) clearly write a career objective for a resume, (b) accurately identify transferable skills, (c) be motivated to identify potential employers and position openings, (d) follow through with information interviewing and networking opportunities, (e) be motivated to research an employer, (f) positively articulate

potential contributions in an employment interview, (g) respond with clarity and enthusiasm to questions posed by an employment interviewer, and (h) follow through with interview thank-you letters (Sampson, et al., 1996b; Sampson, et al., 2004). Cognitive restructuring, within the context of career service delivery, can be used to help persons identify, challenge, and alter negative thoughts that contribute to the problems identified above (Sampson, et al., 1996a; Sampson, et al., 2004).

For some individuals, employment decision-making may provoke more anxiety than occupational decision-making because of the relative specificity of each type of decision. Choosing an occupation and related program of study is typically a more general, future-oriented choice. Failure to obtain an employment position related to an individual's program of study is a possibility, but is typically far enough in the future to cause limited anxiety for most persons. Employment decision-making, however, offers the possibility of specific and immediate rejection by potential employers. As a result, potential failure is concrete and easily perceived. Many job applicants are aware that they are likely to receive several rejections before actually receiving a job offer. As noted in the section on the Communication phase of the CASVE cycle, a little anxiety may be motivational, but substantial anxiety may lead to self-defeating coping behaviors, such as procrastination.

In summary, if individuals expect to do poorly (or to fail) in employment seeking, they will likely have reduced motivation to prepare for and follow through with the steps in the process. Also, negative self-talk can influence individuals' perceptions of their capabilities to perform successfully in a specific position. Subsequent awareness that the individual is not making good progress in obtaining employment only reinforces negative self-talk--for example, "I knew I wasn't going to get a good job, and it seems I was right." Becoming aware of negative thoughts is a key strategy for limiting the potentially harmful impact of negative thinking on employment choice.

Self-Awareness

From a CIP theoretical perspective, effective problem solvers are aware of themselves as they are doing a task. Effective *self-awareness* includes an awareness of the interaction among thoughts, feelings, and behaviors, especially the debilitating impact of negative self-talk on employment choice (Sampson et al., 1996a; Sampson et al., 2004). The following list presents self-awareness factors and sample statements related to the job search process:

- Debilitating negative emotions, such as depression, anxiety, or panic--"I'm really anxious about looking for work after being out of the job market for so long."
- Lack of emotion or caring about an employment problem--for example, lack of motivation--"I'd rather stay in school and change majors than take a job that pays so little."
- Persistent negative thoughts about employment choice--for example, predicting future failure and the use of absolute terminology (such as "never" and "always")--"I'll never find a good job."
- Failure to initiate or persist with employment problem-solving behaviors--"After so many rejection letters, what's the point of continuing to look?"

- Repeating employment exploration behaviors when adequate information is available and when a choice needs to be made--"Do you have a test I can take that will determine the types of jobs I'm suited for?"

Self-awareness also includes the reactions of significant others (such as family and friends) to a job hunter's employment problem solving and decision-making. The following list presents potential issues associated with significant others and sample statements:

- Suggestions from significant others that you are proceeding too slowly with employment choice, indicating that action is needed--"It's time to stop reviewing online job listings and actually start applying for jobs."
- Feedback from significant others to take just any job, when more caution and careful thought is needed--"There are lots of jobs out there. Why are you being so picky?"
- Failure to seek or consider input from significant others--"My spouse is concerned about health benefits, but I'd rather be my own boss."
- Consideration or selection of an inappropriate employer or position--"I know you've never seen yourself as the sales type, but this seems like too good an opportunity to pass up."

As noted in a previous section, although it may be important for some persons to consider input from significant others, not all input may be helpful. Practitioners can help individuals carefully consider all of the information they have received and then assist them in assuming responsibility for making and following through with an appropriate employment choice. Practitioners may also involve persons in cognitive restructuring exercises to improve their self-awareness of the impact of career thoughts on feelings and behavior (Sampson et al., 1996a; 2004).

Monitoring and Control

Monitoring refers to an individual's ability to keep track of their progress through the problem-solving and decision-making process--that is, knowing when it is necessary to stop and get more information (e.g., further researching a prospective employer), knowing when a task has been completed successfully enough to continue with the next step in the process (e.g., having an appropriate number of job targets to pursue), and knowing when assistance will be needed to make an appropriate choice (e.g., being overwhelmed by the number of prospective employers in a particular location). *Control* refers to an individual's ability to purposefully engage in the next appropriate problem-solving and decision-making task, including the ability to control negative thinking, such as controlling negative thoughts prior to a job interview, that creates difficulties in problem solving and decision-making (Peterson et al., 1991; 2002; Sampson et al., 1996a; 2004; 2020). Effective problem solvers and decision makers keep track of the "knowing" and "doing" aspects of choice. They are aware of what they know and what they need to know, as well as what they need to do in the sequence of steps associated with employment choice. In addition to understanding how thoughts influence employment decision-making, practitioners should consider client's readiness level to benefit from employment assistance.

Readiness to Benefit from Employment Assistance

One of the tenants of CIP theory is clients' readiness to benefit from career interventions. This concept is discussed more thoroughly in the next chapter. We mention it here briefly in the context of providing employment assistance. There may be a wide variety of factors, both internal and external, that would affect clients' ability to benefit from interventions designed to help them successfully conduct a job search.

Capability

CIP theory defines capability as "internal factors that make it more or less challenging to solve problems and make decisions. Specific aspects that contribute to higher capability include: (a) honesty in self-exploration, (b) motivation to explore options, (c) thinking clearly, (d) accepting responsibility for choice, (e) awareness of negative self-talk, (f) willingness to get help when needed, and (g) awareness of progress in choosing" (Sampson et al., 2020, p. 16). Within the context of seeking employment, clients need to be motivated if they are to take the steps necessary to obtain employment. Also, depending on the client's current and past employment situation, they may be experiencing anxiety, depression, and related mental health issues. Job seeking is a process filled with potential rejection and stressful moments that can make it difficult to pursue effective strategies recommended by a career practitioner. The intersection of career and mental health issues is discussed further in Chapter 10 of this book.

Along with mental factors that can impact employment, clients who are differently abled may have concerns about how mobility, visual, neurodiversity, and related conditions are viewed by prospective employers. According to the Bureau of Labor Statistics (BLS, 2020), persons with disabilities are much more likely to be unemployed than persons without disabilities (https://www.bls.gov/news.release/pdf/disabl.pdf). CareerOneStop (https://www.careeronestop.org/ResourcesFor/WorkersWithDisabilities/job-search.aspx) and the U.S. Department of Labor (https://www.dol.gov/general/topic/disability/jobsearch) provide additional resources that can useful in assisting job hunters with disabilities. Along with these resources, practitioners and clients can access employment websites (e.g., https://abilityjobs.com/job-search/) specifically targeted to persons with disabilities.

Complexity

CIP theory defines complexity as "external factors that make it more or less challenging to solve problems and make decisions, including family, society, economic, and organizational (for employed persons)" (Sampson et al., 2020, p. 16). In addition to capability factors that may affect a person's ability to effectively utilize employment assistance, events external to them might also present challenges. For example, they may be having to balance work and family demands. They may lack the resources to access childcare in order to pursue employment options, including re-training for alternative job opportunities. These events have been particularly salient as families dealt with the implications of the pandemic, working from home, having children out of school, and the loss of childcare options that followed the pandemic. An additional complexity factor is the nature of job markets in particular geographic areas. While during some economic periods, there may be high demand for workers, this may not be the case across all industries and in other locations around the globe. Events such as climate change (International Labour Organization, 2018), recessions, political upheaval, financial strain may greatly constrain opportunities accessible to job seekers. Finally, as well documented, individuals

across the globe continue to experience discrimination, stereotyping, and related barriers that restrict their employment choices.

Later chapters in this book (see Chapters 7 and 8) highlight key assessments used in CIP theory to assess readiness for career decision-making and career intervention. These include the Career Thoughts Inventory (CTI), the Career State Inventory (CSI), the Decision Space Worksheet (DSW), and the CASVE Cycle Questionnaire (CASVE-CQ). In addition, Chapter 21 highlights newer tools associated with CIP theory, e.g., the Vocational Meaning and Fulfillment Surveys. Use of these assessments in working with employment-seeking clients can help practitioners understand the nature of the client's pyramid and CASVE cycle, and what level of intervention might be most appropriate given clients' decision-making readiness level. In the next section, a brief case example is provided that highlights the application of CIP theory to employment problem solving and decision-making.

A Case Example for Chapter 3

Monique is a 46-year-old married Caucasian female who has two children. Her husband is a local fire fighter who was just promoted to Lieutenant. Until recently, Monique was employed as the office manager at a large commercial real estate agency. The agency was sold and merged with another real estate business, and she has been informed that she will not be needed in the merged organization. Monique has been given three months' severance pay and a positive letter of recommendation but has not been provided with outplacement services. To obtain a similar position in another large agency would likely require her to move to another city. She was reluctant to consider this option in view of her spouse's recent promotion and her children's desire to graduate from the high school they are currently attending. Monique's uncertainty about her future employment prompted her to seek assistance from the career center at a local community college, which is open to the community (Communication).

After a brief screening intervention and readiness assessment (Sampson, et al., 2020; Chapter 7 and 8 in this book), the career advisor noted her total Career State Inventory (CSI) score of 5, which indicates some uncertainty about options. She listed three occupations of interest including administrative assistant, hospital assistant, or human resources, and endorsed that she was unsure about these options. Based upon their discussion and this initial readiness screening, the practitioner judged that Monique had a moderate level of readiness for employment problem solving and decision-making, and that a brief staff-assisted intervention in the center's career library would be appropriate. The practitioner clarified the nature of Monique's problem as a gap between being unemployed and having a satisfying job that provided adequate income and more time to be with her family. The practitioner used printed client versions of the pyramid of information processing domains and the CASVE cycle (Sampson et al., 2020; Chapter 2 in this book) to orient Monique to the employment problem-solving and decision-making process. Using an [Individual Learning Plan](ILP; Peterson et al., 1991, Sampson, et al., 2020; see Chapter 7 in this book), the practitioner and Monique collaboratively established goals for service delivery. The practitioner then recommended a sequence of assessment, information, and instructional resources to assist Monique in achieving her goals of identifying potentially appropriate jobs and restructuring the negative thoughts identified by the Career Thoughts Inventory (Sampson, et al., 1998; Chapter 8 in this book), which was completed as an additional readiness assessment measure. The individual learning plan was renegotiated several times as Monique's needs evolved during service delivery.

Upon wrapping up the initial career advising meeting with Monique, it was decided that she was highly motivated and would likely benefit from brief-assisted, drop-in career advising. She was open to working with different staff members, and she made a commitment to come by each week for the next month to make progress in closing her gap. At the end of her initial drop-in session, the practitioner used the pyramid and the CASVE cycle to help orient her to how she could monitor her progress in the problem-solving and decision-making process. During her next drop-in visit, Monique brought her drafted individual learning plan so she could continue her collaborative work with another practitioner. She then used a computer-assisted career guidance system to clarify her values, interests, and transferable skills. Monique and the practitioner used her previous work experience to clarify her employment preferences and the interaction between her work and family issues (self-knowledge and Analysis). Monique then used a combination of occupational and employer information, along with a web-based job bank, to generate and learn about various local employment options (knowledge of employment options, Analysis, and Synthesis--elaboration). The practitioner occasionally asked Monique to verbalize her thoughts about the options she was considering to determine if negative thoughts were compromising her problem-solving and decision-making process. When negative thoughts were identified, the practitioner used a cognitive restructuring exercise (Sampson et al., 1996b) to identify, challenge, and alter Monique's negative career thoughts (executive processing).

With the support of her practitioner, Monique used her self- and employment knowledge to narrow down the employment options she was considering (Synthesis--crystallization). During her third visit, Monique used a theory-based written exercise, a *Guide to Good Decision Making* (https://career.fsu.edu/tech-center/resources/service-delivery-handouts) to evaluate the costs and benefits of her employment options to herself, her family, her cultural group, and her community. After prioritizing her options, she tentatively decided to apply for an administrative position with a local employer (Valuing). Monique then prepared for and interviewed for the position of administrative assistant to the chief operating officer of a large local hospital (Execution). She returned to the career center to inform her practitioner that she had received, and accepted, an offer to work as an administrative assistant at the hospital. The practitioner briefly reviewed the gap that had prompted Monique to seek career services, and they then mutually agreed that she had achieved her goals (return to Communication). The practitioner concluded service delivery by discussing with Monique what she had learned from receiving services and how she might apply this learning to inevitable employment choices that she will make in the future.

Chapter 3 Summary

In this chapter the nature of employment choices and employment problems were explored from a CIP theory-based perspective. Concepts discussed included (a) knowledge of self (values, interests, skills, employment preferences, and family situation); (b) knowledge of employment options (knowledge of specific industries, employers, employment positions, and employer classifications); (c) the CASVE cycle (Communication, Analysis, Synthesis, Valuing, and Execution); and (d) executive processing (self-talk, self-awareness, and control and monitoring). The chapter also highlighted how CIP theory's readiness constructs of capability and complexity might impact individuals' ability to benefit from employment-seeking assistance. A case example showed how the pyramid of information processing domains and the CASVE cycle could be applied to employment problem solving and decision-making.

Getting the Most Benefit from Reading Chapter 3

To effectively learn the material in this chapter, complete one or more of the following activities:

- In your own words, describe the nature of your past or present employment problems.
- Write down the similarities and differences between occupational decisions and employment decisions.
- Think about your own employment history. Select one jo-seeking experience and write about it using the pyramid of information processing domains and the CASVE cycle.
- Draw and label Figures 3.1 and 3.2
- Talk with a career practitioner and identify employment resources and services available to persons with employment problems.

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CHAPTER 4
READINESS FOR CAREER CHOICES AND CAREER INTERVENTIONS

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This chapter introduces readiness models for career choices and career interventions. These models are intended to assist practitioners in understanding how prepared individuals are to make informed and careful choices about occupations, education, training, and employment, as well as understanding how prepared they are to make effective use of career interventions that are available to assist them in making those choices. This better understanding of individuals' readiness should help in selecting a type and level of career intervention that is most effective. Readiness is currently a popular term in career development theory, research, practice, and policy, e.g., college readiness, career readiness, job readiness, and employment readiness.

Generally, these terms refer to having the knowledge, attitudes, and skills necessary to succeed in post-secondary education and employment. While it is very likely that being ready to make informed and careful decisions among occupational, educational, training, and employment options contributes to college readiness, career readiness, job readiness, and employment readiness, the decision-making readiness concept in CIP theory is more narrowly focused on preparedness for career decision-making and provides the foundation for differentiated service delivery that is described in Chapter 7 of this book.

The chapter begins with a description of a two-dimensional model of readiness for career choices and continues with a description of factors contributing to low readiness for effective use of career interventions. The chapter concludes with a summary and recommendations for getting the most benefit from Chapter 4.

A Two-Dimensional Model of Readiness for Career Choices[14]

In the CIP theoretical approach, *readiness* for career choices is defined as the *capability* of an individual to make appropriate career choices while considering the *complexity* of family, social, economic, and organizational factors that influence an individual's career development. Another way of viewing these two dimensions is that capability represents internal factors and complexity represents external factors that influence an individual's ability to make informed and careful career choices (Sampson et al., 2000; 2004; 2020). Readiness for career choices also requires consideration of an individual's internal (i.e., cognitive and affective) and external (i.e., social, such as socio-economic status, experiences with discrimination) dimensions with respect to undertaking the task of solving a career problem. Specifically, readiness for career problem solving and decision-making reflects a person's preparation for engaging in the learning activities necessary to explore and decide among options (Jiang et al., 2019; Sampson et al., 2013; Sampson et al., 2020).

Capability

Capability refers to the cognitive and affective capacity of an individual to engage in effective career problem solving and decision-making (Sampson, et al., (2004). Individuals who are in a higher state of readiness possess the necessary cognitive capacity and positive affective states to effectively engage in career problem solving and decision-making. Individuals who are less ready for effective career problem solving and decision-making may be inhibited by dysfunctional thoughts and negative emotions, such as depression and anxiety. For example, Hayden and Osborn (2020) found relationships between worry, dysfunctional career thoughts, and career decision state.

The following conditions influence individuals' capability to successfully engage in career problem solving and career decision-making. First, individuals are willing to honestly explore their knowledge of self (e.g., values, interests, skills, and employment preferences) to attain a clearer sense of identity (self-knowledge). Second, individuals are motivated to learn about the world of work to enhance the development of options knowledge. Third, individuals are willing to learn about and engage in career problem solving and decision-making (career decision-making skills). Important components of the ability to think through a career problem

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[14] Content in this section was used or adapted from Sampson et al., (2004; 2020). Used or adapted with permission.

and arrive at a career decision include (a) the capacity for thinking clearly about one's career problem, its causes, and alternative courses of action to solve it; (b) confidence in selecting a best alternative course of action to solve the problem and the commitment to carry out a plan of action to implement a solution; and (c) an acceptance of personal responsibility for making a career decision. Fourth, individuals are aware of how negative thoughts and feelings potentially limit their ability to think clearly and remain motivated to solve problems and make decisions. Individuals are willing to seek assistance when they perceive that personal or external barriers are limiting their ability to choose. Individuals also possess the capacity to monitor and regulate lower-order problem-solving and decision-making processes (executive processing) (Sampson et al., 2000; 2004).

Within CIP theory, the construct of decision-making confusion, measured by the Career Thoughts Inventory (CTI; Sampson et al., 1996a), can be used to assess the capability dimension of readiness for career decision-making. Chapter 8 provides a description of the design and use of the CTI. Table 4.1 summarizes primary factors for the capability dimension.

Table 4.1

Primary Factors for the Capability Dimension and Relationship to the Pyramid of Information Processing Domains

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Honesty in exploring values, interests, skills, and employment preferences (Self-Knowledge)

Motivation to learn about options (Options Knowledge)

Clarity of thinking about career problems (Decision-Making Skills Domain)

Confidence in decision-making ability (Decision-Making Skills Domain)

Assumption of responsibility for problem solving (Decision-Making Skills Domain)

Awareness of how thoughts and feelings influence behavior (Executive Processing Domain)

Ability to *monitor and regulate* problem solving (Executive Processing Domain)

Mental health potentially has a strong influence on the capability dimension of the readiness model. Mental health issues, such as anxiety and depression, share a common element of negatively distorted cognitions which are measured by the Career Thoughts Inventory (CTI; Sampson et al., 1996a). The *Career Thoughts Inventory Workbook* (CTI Workbook; Sampson et al., 1996b, p. 9) provides examples of potential consequences of positive and negative cognitions on elements of career choices. These consequences are shown in Table 4.2:

Table 4.2

Potential Consequences of Positive and Negative Cognitions on Elements of Career Choices[15]

Elements of Career Choices	Consequences of Thinking Positively about Career Choices (Less anxiety and depression)	Consequences of Thinking Negatively about Career Choices (More anxiety and depression)
Motivation	"Stay motivated even when no quick answers exist"	"Be discouraged when it is clear that quick answers don't exist"
Information seeking behavior	"Actively seek the information needed to make a decision"	"Avoid doing what it takes to get the information"
Focus	"Stay focused on making good career choices and avoid being distracted"	"Be easily distracted when frustration occurs"
Clarity of thought	"Think clearly and realistically about the good and bad points of career choices"	"Be confused about the good and bad points of career choices"
Input from significant others	"Make better use of the opinions of important people in your life"	"Be overwhelmed by the opinions of important people in your life"
Seeking assistance as needed	"Get help when needed"	"Avoid getting the help that is needed"
Follow through	"Follow through with useful 'next steps' after a decision is made"	"Avoid ever making a choice or avoid following through with what needs to be done after a choice is made."

Refer to Chapter 10, "Connecting CIP Theory and Mental Health Concerns" for a more detailed examination of the potential impact of mental health issues on career choices.

Complexity

Complexity refers to contextual factors, originating in the family, society, economy, or employing organizations, that make it more difficult (or less difficult) to process information necessary to make career choices. The complexity dimension influences the positive or negative

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[15] From the CTI Workbook (Sampson et al., 1996b, p. 9).

nature of an individual's self-talk and approach to career choices, as well as the content of self- and knowledge about options. Elements associated with each of the four factors (family, social, economic, and organizational) can be conceptualized as either a barrier or a support.

Various scholars (e.g., Arthur & McMahon, 2005; Lent, 2020; Gelso & Williams, 2022; Niles & Bowlsbey, 2022; Patton & McMahon, 2014; Tang, 2019) have discussed the importance of focusing on the interaction between individual and contextual or systemic influences and how these influences may inform career interventions. An increase in career-focused articles on inclusion of individual identity domains (e.g., race, gender) in both research and theory has been noted (Garriott, et al., 2017), but systemic influences needed greater attention. The degree to which a person or their significant other is employed in decent work (Blustein & Duffy, 2020), which includes characteristics such as receiving a fair income and access to health care, may also contribute to or compound complexity. For example, a person who lacks job security might feel pressured to look for the next best available option rather than taking time to engage in thoughtful career exploration. Or a person whose job(s) result in mental fatigue may need to take more time on smaller career-related tasks. The complexity dimension presented here acknowledges the importance of and incorporates the consideration of structural and cultural factors that influence career development.

Individuals who are in a higher state of readiness typically have fewer family, social, economic, and organizational factors to cope with in career problem solving and decision-making or are employing effective coping strategies that allow them to focus on their career concern. Individuals in a lower state of readiness may be coping with one severely debilitating factor (e.g., blatant discrimination based on group membership), or they may be coping with a combination of contextual factors that collectively make career problem solving and decision-making more difficult (e.g., being a single parent working for a large, diversified employer with numerous positions who is downsizing during a recession). These factors can generate emotional states such as anxiety, depression, and anger that subsequently make it even more difficult to process information necessary for effective career problem solving.

From a CIP theory-based perspective, an individual with a more complex career problem needs to develop more-complex self-knowledge and options knowledge schemata to process information effectively in problem solving. For example, an individual who is attempting to balance their employment needs with the employment needs of their spouse or partner, while also attending to the developmental needs of children and elder care for aging parents, will have to develop schemata that are capable of coping with the large number of variables inherent in a career problem of this complexity. Another approach could involve helping an overwhelmed person cope by dealing with each factor and its subparts independently and sequentially, sometimes referred to as "chunking" (Gobet et al., 2016). As a person explores CIP theory's knowledge domain, a career practitioner can guide the individual to consider each option they are considering in light of the complexities they are experiencing. In the previous example, the individual might work with a practitioner to examine self and options knowledge in the context of the needs and demands associated with balancing multiple work and family issues. For example, while an individual might really prefer an option that requires additional education or training, they might have to consider other aspects such as how to finance that training while still providing for the family needs. The following four sections examine specific complexity factors related to family, society, the economy, and organizations.

Family Factors

Family factors can contribute to or detract from readiness for career decision-making. Detracting factors can involve multiple elements or a single intense, overwhelming factor. Individuals with *few family responsibilities or stressors* potentially have fewer challenges to cope with, which can contribute to reduced complexity in career decision-making. Whiston and Cinamon (2015) found that family-work conflict (FWC) led to multiple negative outcomes such as dissatisfaction with both work and family. Individuals with *supportive family members* typically have more resources for understanding and coping with problems that exist. However, individuals with *multiple family responsibilities or stressors* may need to develop more-complex schemata or isolate factors independently and manage them one at a time to cope with the increased variables in decision-making. In their review of the literature, Whiston and Cinamon (2015) summarized research that identified family conflict, family stress, a decrease in spousal support or an increase spousal criticism as antecedents of FWC. They noted that research in this area has generally failed to find gender differences but noted that the more time a person from either gender spent on family activities, the more they were likely to experience FWC, and that regardless of marital status, having children increases the likelihood of FWC for both genders. Cultural considerations might also play into this, as those who place a high value on family identity had more FWC. Work-family conflict can be problematic for women who experience *role overload* due to additional expectations to take primary responsibility for household responsibilities and care work (children, elders, or both). And in recent years, due to the pandemic (Woodbridge et. al., 2021), the challenges associated with balancing work and family roles likely increased for many women. In a survey of 155 employed women, role overload was negatively correlated with psychological health as well as job and leisure satisfaction (Pearson, 2008). The same might be the case for men who are single parents with limited support resources, or men who have taken on the role of stay-at-home dad.

The amount of social support or social connections that individuals have when dealing with work-family issues or during career transitions are important considerations (Allan & Kim, 2020; Brown, 2020; Hirschi, 2020). Akkermans et al. (2018) used the term "career shocks," defined as "a disruptive and extraordinary event that is, at least to some degree, caused by factors outside the focal individual's control and that triggers a deliberate thought process concerning one's career" (p. 4). For example, Lustig and Xu (2018) found that family cohesion was related to lower negative career thoughts – specifically decision-making confusion, commitment anxiety, and external conflict (all subscales on the Career Thoughts Inventory, Sampson et al., 1996a). In addition, they found that family adaptability was associated with lower levels of external conflict. The CTI's External Conflict scale is designed to identify the extent to which dysfunctional thoughts associated with input from significant others impedes problem solving. Input from family members may not always be supportive and may result in increased complexity in decision-making (Wordsworth & Nilakant, 2021). This type of non-supportive input is particularly problematic when the family member is highly esteemed by the individual making career choices. *Dysfunctional family input* may exist even where family involvement in career decisions is highly valued (Chope, 2005; Lustig & Xu, 2018).

Social Factors

Social factors can also contribute to or detract from career decision-making readiness. Whereas *social support* in the form of modeling, mentoring, networking, and caring can greatly

facilitate career development, other factors such as discrimination, stereotyping, lack of role models, bias, and harassment make individuals' career decision-making process more complicated. *Stereotyping* occurs when knowledge about another person is based on general characteristics of a group of persons; *discrimination* involves persons acting on stereotypes in a way that harms another person (Sampson et al., 2013). Discrimination based on group membership (e.g., age, disability, ethnicity, first generation status, gender identity, geographic location, immigration status, indigenous background, nationality, race, religion, sexual orientation, sex assigned at birth, and socioeconomic status) may limit occupational, educational, training, and employment opportunities. Despite the increased cultural pluralism of society, there is an ongoing need to attend to potential career development obstacles that may be experienced by selected groups within society (Gelso & Nutt, 2022; Niles & Harris-Bowlsbey, 2022; Tang, 2019). Individuals from racial and ethnic minority backgrounds may experience discrimination and perceived barriers which in turn negatively affects career-related outcomes (Fouad & Kantamneni, 2020; Tang, 2019). Anticipating or directly experiencing these problems may make it more difficult for individuals to develop and integrate self-knowledge and options knowledge as part of the career decision-making process. Also, individuals experiencing discrimination in education, training, and employment may be denied accurate feedback on their abilities, which complicates the development of self-schemata in that it is uncertain if their failure or success was based on their group membership or their actual ability to perform in class or on the job.

Economic Factors

Economic factors can support or inhibit readiness for career decision-making. The influence of economic factors on readiness can be experienced on a general and a personal level. *General economic factors* include economic trends that influence the rate of change in the labor market. For example, individuals in relatively stable occupations and industries may be able to benefit from the stable occupational knowledge that is transmitted from family members, supervisors, or mentors, whereas individuals who are in rapidly evolving occupations and industries or who are experiencing unstable working conditions (Blustein, 2019) may have to cope with rapidly changing options knowledge with little informed assistance from family, supervisors, or mentors. On a personal level, having *inadequate financial resources* may negatively impact career and educational aspirations, career decision-making self-efficacy, and job opportunities (Juntunen et al., 2020), as well as making it more difficult to obtain housing, transportation, health care, and childcare. These problems make it more difficult to think clearly and engage in the complex information processing necessary to solve career problems and make career decisions. Limited personal income may also make it more difficult to fund education and training once an occupational choice is made, reinforcing negative self-talk that educational and employment success is not possible. On the other hand, having adequate financial resources typically makes it easier to complete career transitions.

Organizational Factors

Organizational factors can help or hinder the readiness of employed adults to make decisions about future occupations, education, training, and employment. The size of an employing organization can impact the opportunity structure and the nature of the decision-making variables that need to be considered. For example, large organizations typically have an internal employment market that an employee can explore in addition to seeking a job in a different organization. The extensive opportunities for employment in a large organization can

make employment decision-making more complicated than in small organizations with limited opportunities. However, in smaller organizations, employment choices can be complicated when personal relationships in family-owned businesses create challenges in balancing the needs of the business and the needs of individuals. *Organizational culture* may influence complexity in relation to the amount of support provided for employee career development. In an organizational culture that supports effective mentoring, supervision, and performance appraisal, employees are more likely to have higher readiness to make career decisions. Employees in organizations with a culture that does not support employee career development may be less prepared to make career decisions. The impact of organizational factors can vary by gender and social class. Schultheiss (2020) suggested that "the intersection of gender and social class plays a key role in socialization, accessibility of resources and opportunities and barriers" (p. 299). The *stability of the organization* can also influence complexity. Stable organizations with predictable opportunity structures tend to be less complex to navigate in comparison with unstable organizations that are rapidly expanding, being downsized, or being taken over by another similar business.

The family, social, economic, and organizational factors described above may combine to further reduce an individual's readiness for career decision-making. For example, an individual experiencing discrimination may also be living with very limited financial resources and many family responsibilities while attempting to negotiate a career change in an organization that is downsizing. The External Conflict scale of the Career Thoughts Inventory (Sampson et al., 1996a) can be used to measure some aspects of the complexity dimension in this readiness model. Another assessment tool for measuring the complexity dimension is the Decision Space Worksheet (DSW; Peterson et al., 2010; 2016). The design and use of this measure is described in Chapter 8. Table 4.3 summarizes factors for the complexity dimension.

Table 4.3

Positive and Negative Impact Factors on the Complexity Dimension of Career Choice Readiness

Primary Factor	Impact	Secondary Factor
Family	Positive	Few family responsibilities or stressors
	Negative	Multiple family responsibilities or stressors (or one stressor with great intensity)
	Positive	Supportive family members, including financial support
	Negative	Deferral (compromise own career development for child or elder care responsibilities)
	Negative	Role overload (difficulty balancing work with other life roles)
	Negative	Dysfunctional family input
Social	Positive	Support (caring relationships, financial, modeling, mentoring, networking,)
	Negative	Discrimination
	Negative	Stereotyping
	Negative	Lack of role models
	Negative	Bias in education
	Negative	Harassment in education and employment
Economic	Positive	Predictability in options knowledge from stable employment market
	Negative	Rapid change in options knowledge from unstable employment market
	Positive	Adequate personal financial resources
	Negative	Inadequate personal financial resources
Organizational	Positive	Small employing organization might have a less complicated internal job market
	Negative	Large employing organization has a more complicated internal job market
	Positive	Organizational culture that supports employee career development
	Negative	Organizational culture that does not support employee career development
	Positive	Stable employing organization has more predictable employment opportunities
	Negative	Unstable employing organization has less predictable employment opportunities

Low Readiness for Effective Use of Career interventions[16]

The model of readiness for career choice described in the previous section focuses specifically on capability and complexity factors. However, there are other readiness constructs that are also relevant to the design and delivery of career interventions, namely the readiness of individuals to benefit from receiving career interventions. Variables such as language literacy, learning disability, and prior experience with career services can also have an impact on the effectiveness of career interventions. Practitioners designing career interventions and researchers examining the efficacy of these interventions need to be aware of the full range of readiness variables that can impact intervention effectiveness (Sampson, Osborn, & Bullock-Yowell, 2020). This section of the chapter provides a comprehensive conceptualization of readiness to benefit from career interventions that is presented in a four-part schema (shown in Table 4.4). The schema includes: 1) personal characteristics, 2) personal circumstances, 3) limited knowledge of self, options, and decision-making, and 4) prior experience with career interventions. There is some overlap between the capability factor and the personal characteristic of acute and/or chronic negative thoughts and feelings, and the complexity factor and the personal circumstances of acute or chronic external barriers. However, other variables in this section of the chapter are uniquely related to readiness to benefit from career interventions. After examining factors contributing to low readiness to benefit from career interventions, the chapter continues with the consequences of low readiness for effective use of career interventions and conceptualizing the nature of readiness for career choice.

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[16] Content in this section was used or adapted from Sampson et al., (2013). Used or adapted with permission.

Table 4.4

Factors Contributing to Low Readiness for Effective Use of Career Interventions

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Personal Characteristics

    Acute and/or chronic negative thoughts and feelings

    Limited verbal aptitude

    Limited language proficiency

    Limited computer literacy

Personal Circumstances

    Acute or chronic external barriers

Limited Knowledge of Self, Options, and Decision-Making

    Limited life experience

    Limited inclination to reflect on self-knowledge gained from life experience

    Limited knowledge of occupations, educational/training options, or employment opportunities

    Limited knowledge about the decision-making process

Prior Experience with Career Interventions

    Limited prior experience with career resources

    Inappropriate expectations about career choice and career services

    Negative prior experience with career interventions

Personal Characteristics

Acute and/or Chronic Negative Thoughts and Feelings

      Negative thoughts and feelings can make it difficult to make effective use of career interventions. These negative thoughts and feelings can be acute, chronic, or both. For example, acute negative thoughts and feelings associated with depression and anxiety can cause a temporary inability to focus on career decision-making, as well as the inability to focus on the effective use of career assessments and information. Chronic negative thoughts and feelings associated with depression, anxiety, and neuroticism can make it difficult for individuals to initiate or sustain career decision-making due to factors such as absolute thinking, fear of failure, fear of success, perfectionism (Coleman, et al., 2023; Lustig & Strauser, 2003; Sampson et al., 1998; Van Ecke, 2007; Walker & Peterson, 2012). Individuals may also be unable to make a commitment to a career choice even though sufficient information is available and adequate time for problem solving has transpired (Sampson et al., 1998). Individuals may also be unwilling to assume personal responsibility for their own decision-making (Gati, 2013; Sampson et al., 1998). The amount of input desired from significant others in career decision-making may vary among cultures (e.g., Fouad & Kantamneni, 2020; Tang, 2019; Young & Valach, 2004). Individuals

may not have the motivation necessary to adequately use and learn from career interventions (Leong et al., 2010; Peterson et al., 1991; Pizzolato, 2007). Individuals may be indecisive to such an extent that they have difficulty in making any type of decision, including a career decision (Gati, 2013; McAuliffe et al., 2006; Sampson et al., 2004; Talib & Tan, 2009). Individuals may have inadequate vocational identity necessary for individuals to have clear and stable career aspirations and confidence in their decision-making ability (Holland, 1997; McQuown-Linnemeyer & Brown, 2010; McAuliffe et al., 2006). Individuals may have temporary or continuing problems adjusting to a behavioral, emotional, cognitive, physical, or sensory disability that makes it difficult for them to attend to career decision-making (Lustig & Strauser, 2003).

Limited Verbal Aptitude, Language Proficiency, and Computer Literacy

Limited verbal aptitude can reduce the capacity of individuals to process the large amounts of often complex and symbolic information about self, options, and decision-making that is required in choosing among occupational, educational training, and employment options. Limited language proficiency can compromise the capacity of individuals to read and understand the content of career resources in a second language. Limited computer literacy can make it difficult for individuals to make the best use of information and communication technology to obtain the career resources, and ultimately career services, that they need (Sampson et al., 2018).

Personal Circumstances

Acute or Chronic External Barriers

The existence of disabling family, social, economic, or organizational factors can make it more difficult for individuals to make decisions, despite the availability of career interventions (Sampson et al., 2000). As stated earlier in this chapter, detracting *family* factors include multiple family responsibilities, multiple family stressors, deferral, role overload, and dysfunctional family input. Family life can contribute to or detract from readiness for career choice. Individuals' career choice readiness can be enhanced when family members have few family responsibilities or stressors that complicate choice, provide healthy assistance during career choice, and are supportive of the choices made by an individual (Van Ecke, 2007). Detracting *social* factors include stereotyping, discrimination, lack of role models, bias in education or employment, and harassment in education or employment. Social factors can contribute to or detract from an individual's readiness to benefit from career interventions. Individuals' career choice readiness can be enhanced by modeling, mentoring, networking, and caring relationships with significant others (Shinnar, 2007; Williams et al., 2009; Wu & Chang, 2009). Detracting *economic* factors include rapid economic change, unstable work (Blustein, 2019) and inadequate personal finances, such as poverty. While occupational, educational, training, and employment options often change over time, the rate of change varies from rapid to relatively stable (Diemer & Hsieh, 2008; Lustig & Strauser 2003; Sampson & Reardon, 2011; Schnorr & Ware, 2001; Shinnar, 2007). Detracting *organizational* factors for employed individuals include complicated internal job markets, unstable organizations, and unsupportive organizational cultures (Wendlandt & Rochlen, 2008; Wu & Chang, 2009).

Limited Knowledge of Self, Options, and Decision-Making

Limited Life Experience

Some persons lack the work, education, and leisure experience needed for them to clearly articulate their values, interests, skills, and employment preferences (Gati, 2013; Lustig & Strauser, 2003; Wendlandt & Rochlen, 2008; Wu & Chang, 2009).

Limited Inclination to Reflect on Self-Knowledge Gained from Life Experience

Some persons are disinclined to reflect on their life experience which can result in them having difficulty using their prior work, education, leisure, and family life as a basis for clarifying values, interests, skills, and employment preferences (Grier-Reed et al., 2009; Usinger & Smith, 2010).

Limited Knowledge of Occupational, Educational, Training, or Employment Options

Some persons find it difficult to generate plausible options, due to a lack of knowledge about their occupational, educational, training, or employment alternatives (Abu Talib & Tan, 2009; Gati, 2013; Holland, 1997; Shinnar, 2007), which can include limited exposure to options due to a variety of external factors (e.g., discrimination, geographic location, poverty, etc.).

Limited Knowledge About the Decision-Making Process

Some persons are unable to initiate or sustain career decision-making, due to a lack of knowledge about the decision-making process, despite the availability of career interventions (Gati, 2013; Hirschi & Lage, 2007; Krieshok et al., 2009; Sampson et al., 2004).

Prior Experience with Career Interventions

Limited Prior Experience with Career Resources

Limited prior exposure to self-assessments or occupational information may leave individuals confused about how to use the career resources that are available. For example, when using an interest self-assessment, these individuals may not know when they need to seek assistance from a practitioner. This may be particularly problematic for individuals with limited experience who are attempting to use self-help resources in a career resource center or online (Di Fabio & Bernaud, 2008; Koszalka et al., 2005; Sampson et al., 2020).

Inappropriate Expectations about Career Choice and Career Services

Unrealistic belief that there is one perfect choice, and all an individual must do is find the occupation, educational, training, or employment option they are seeking (Diemer & Hsieh, 2008; Di Fabio & Bernaud, 2008; Koszalka et al., 2005; Osborn et al., 2003; Wendlandt & Rochlen, 2008) are examples of inappropriate beliefs or expectations. For example, persons sometimes have an inappropriate expectation that a career information delivery system best knows how to match occupations with the individual's characteristics (Osborn et al., 2003, 2021).

Negative Prior Experience with Career Interventions

Negative prior experience of individuals with career interventions can result in anticipation of unsuccessful use of career interventions, resulting in a self-fulfilling prophecy of failure in making an informed career choice (Fouad et al., 2006; Tuttle, 2000; Williams et al., 2008).

While some individuals may only experience one of the readiness factors described above, others may experience multiple barriers and have a particularly difficult time making effective use of career interventions. In some cases, even experiencing one acute readiness factor can result in great difficulty with executing a career choice or making a career-related decision.

Consequences of Low Readiness for Effective Use of Career Interventions

The factors that contribute to low readiness for effective use of career interventions can result in a variety of potentially negative consequences for persons. Practitioners need to be alert to the following behaviors and statements (summarized in Table 4.5) and provide specific interventions to address these consequences of low readiness.

Table 4.5

Consequences of Low Readiness for Effective Use of Career Interventions

Premature disengagement
Negative perception of skills
Negative perception of interests
Selective acquisition of incomplete information
Premature foreclosure
Protracted exploration
Dependent decision-making style
Biased evaluation of options

Premature Disengagement

Persons may prematurely disengage from using career resources and services due to their perception that any difficulty in using career resources indicates that they cannot be helped. For example, a person may discontinue use of self-assessment and search for option features of a career information delivery system when the initial listing of potentially appropriate occupations does not include any current occupational aspirations and they are unwilling to ask for help in using the system (McGaha & Fitzpatrick, 2005; Wachter Morris et al., 2009).

Negative Perception of Skills

Persons may develop a negative perception of their skills due to anticipated failure at work tasks that they perceive would likely lead to disappointment and embarrassment. For example, an individual underestimates their skills in a skills assessment activity, resulting in an

unnecessarily restricted list of potentially appropriate occupations that do not fully reflect the individual's potential for success (Gati & Kulcsár, 2021; Hirschi, 2009; McQuarrie & Jackson, 2002).

Negative Perception of Interests

Persons may develop a negative perception of their interests after they imagined failure in applying the skills associated with an interest (Lent, 2020). For example, an individual might initially express an interest in public speaking but then perceived failure in front of others, due to a lack of skill, results in reduced interest in speaking publicly. Similarly, an individual who is completing an interest assessment may fail to indicate interest in various work activities, resulting in an unnecessarily restricted list of potentially appropriate occupations that do not fully reflect the individual's potential for satisfaction in a range of occupations (Hirschi & Lage, 2007; Hirschi & Lage, 2008b; Kerka, 2001).

Selective Acquisition of Incomplete Career Information

Persons may selectively acquire incomplete career information which then reinforces a preexisting conclusion that they would not be interested in or succeed in an occupation or education/training program (e.g., a self-fulfilling prophecy). For example, a person selectively reviews occupational information topics that focus on the difficult aspects of work in specific occupations (Corcoran, 2000).

Premature Foreclosure

Persons may prematurely foreclose occupational, educational, training, or employment options to avoid the risk or effort involved in exploring other potentially appropriate options and take the path of least resistance. For example, a person prematurely discontinues use of the search for options feature of a career information delivery system after one search to confirm an occupational choice that poses little risk of failure, even though the individual has only minimal interest in the occupation (McQuown et al., 2010).

Protracted Exploration

Persons may engage in protracted exploration of occupational, educational, training, or employment choices to avoid the risk of failure by incessantly seeking more information before making a career choice. For example, a person repeatedly uses the self-assessment and search for options features of a career information delivery system, thinking that they are making good use of the system by making sure that have identified all potentially appropriate options (McAuliffe et al., 2006; Pizzolato, 2007; Yang & Gysbers, 2007).

Dependent Decision-Making Style

Persons may adopt a dependent decision-making style to avoid taking responsibility for a career decision that could be made by a significant other. For example, a person defers to a significant other to interpret the meaning of interest inventory results and to suggest occupations on the test interpretation profile that are most appropriate for further consideration (Creed et al., 2004; Gati et al., 2010; Hirschi & Lage, 2008a; Leong et al., 2010; Van Ecke, 2007).

Biased Evaluation of Options

Finally, persons may engage in biased evaluation of options where the benefits are underestimated, and the limitations are overestimated in a way that reinforces a preexisting conclusion that an occupational or educational/training option is inappropriate. For example, a person focuses only on occupational information that supports their preexisting biased view of occupations (Otto et al., 2010; Schnorr & Ware, 2001).

The two ultimate consequences of low readiness for career decision-making often include the necessity of making a forced choice when an absolute time limit is reached (often selecting by default the only option that remains), or failing to select a better occupational, educational/training or employment option when such an option was available.

Conceptualizing the Nature of Readiness for Career Choices

The readiness factors included in Table 4.4 are phrased in negative form to make it clear that some characteristics of individuals, the circumstances in which they live, or both, can contribute to problems in making career decisions and that these problems need to be addressed when delivering career interventions.

A high level of readiness for choices can contribute to career decision-making, while a low level of readiness can detract from decision-making. Cultural variables can both enhance or limit readiness for career decision-making. For example, the increased family involvement among some cultural groups can provide additional support for individuals making career choices (Tang, 2019). However, the discrimination faced by some cultural groups can make decision-making much more difficult.

While there is value in "stressing the positive" and "focusing on the strengths" with individuals, practitioners also can help individuals understand how their characteristics or circumstances may negatively impact their ability to effectively engage in career problem-solving and decision-making. When discussing readiness, one option is to conceptualize negative readiness factors as *barriers*, which implies that the barriers can either be *removed* or *coped with*. The discussion can then focus on exploring strategies to help the client remove or cope with the barriers they are experiencing.

The readiness of individuals to use career resources effectively is undoubtedly influenced by one or more readiness factors that can negatively impact career intervention outcomes. While some readiness factors are more difficult to identify than others, it is possible to assess the existence of these barriers using an interview, or tools such as the Career State Inventory (CSI: Leierer et al., 2022), the Career Thoughts Inventory (CTI) and/or the Decision Space Worksheet (DSW; Peterson et al., 2010; 2016). The design and use of these measures is described in Chapter 8. After identifying barriers, it is possible to monitor any further negative impact and help individuals take full advantage of the career interventions available with the main purpose of fostering informed and careful career choices.

Chapter 4 Summary

This chapter presented a two-dimensional model of readiness for career choice that included capability and complexity (family, social, economic, and organizational factors). The chapter included a second model that described the readiness to benefit from career interventions in terms of 1) personal characteristics, 2) personal circumstances, 3) limited knowledge of self,

options, and decision-making, and 4) prior experience with career interventions. The potential consequences of low readiness for effective use of career interventions were then described. The chapter ended with a discussion of conceptualizing readiness variables in positive and negative terms.

Getting the Most Benefit from Reading Chapter 4

To effectively learn the material in this chapter, complete one or more of the following activities:

- Describe the factors associated with the readiness dimensions of capability and complexity.
- Describe the factors associated with readiness dimensions for career intervention.
- Estimate your own readiness for career interventions using the elements of Table 4.1 and Table 4.3.
- Estimate your own readiness for career interventions using the elements of Table 4.4.
- Identify time where you or a client experienced a negative consequence from low readiness to benefit from career interventions.

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CHAPTER 5
INTEGRATING CIP THEORY WITH RIASEC THEORY[17]

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Previous literature has frequently called for the integration of theory, research, and practice (Sampson, et al., 2013; Sampson, 2017). In particular, practitioners make wide use of assessment instruments in assisting clients, but this work is not always connected to career

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theories. As noted in Chapter 2, we believe that CIP theory can be easily integrated with other career theories and be used to inform practice. In this Chapter, we provide more detail on how CIP theory and RIASEC theory (Holland, 1997; Reardon & Lenz, 2015) can guide and inform practice and research. Indeed, this chapter provides a unique perspective in the fields of vocational psychology and career development where two theories with distinctive histories have been linked together in a synergistic relationship. The chapter begins with a discussion of transforming CIP and RIASEC theories into practice and continues with an examination of what's involved in career choice (including knowledge of self, knowledge of options, decision-making, and executive processing), followed by a discussion of the Career Thoughts Inventory and the Career State Inventory, connecting CIP and RIASEC theories via research, and connecting CIP and RIASEC theories in a personal career theory. The chapter concludes with a summary and strategies for getting the most benefit from reading the chapter.

Transforming CIP and RIASEC Theories into Practice

Although the Florida State University career center had been providing career services for more than 25 years and used Holland's career theory and instruments for most of that time, no single career theory guided our work. A series of collaborative efforts between career center staff and faculty members in our counseling program led to the development of CIP theory which helped to tie practice, research, and theory together, and provided a context and rationale for the use of Holland's instruments, particularly the Self-Directed Search (SDS; Holland & Messer, 2013). (Note: In 2017, the publisher renamed the SDS and related materials *StandardSDS*). Persons desiring a more in-depth discussion of CIP and RIASEC theories and related applications are referred to other chapters in this book and the *Festschrift* by Reardon (2022) based on John Holland's autobiography (Rayman & Gottfredson, 2020).

Using a pyramid figure for illustration (see Figure 2.1 in Chapter 2), CIP theory emphasizes four aspects of the career choice process, the first three of which are very familiar to readers.

1. The first component is labeled *self-knowledge*. Self-knowledge refers to "individuals' perceptions of their own values, interests, skills, and so forth" (Sampson et al., 1996b, p. 6).

2. The second component is *options-knowledge*, including educational, occupational, employment, and leisure alternatives and knowledge about how they are organized.

3. The third area is the *decision-making* process. CIP theory uses a generic problem-solving process referred to as the CASVE cycle (See Figure 2.3 in Chapter 2), the steps of which will be described in more detail in a later section of this chapter.

4. We refer to the last component of the CIP pyramid as the *executive processing domain*, or more simply "thinking about thinking," which may be less familiar to readers. This focus on how individuals think and feel about their career choices has received increasing attention in the career literature. In our experience, individuals' views of themselves as career problem solvers and the "conversations" they have with themselves about their career decisions have a huge impact on their ability to make good use of knowledge about themselves and their options in career decision-making. In a later section, we will explore how negative thoughts can impact the career problem-solving and decision-making process and how signs from the Self-Directed Search (SDS; Holland & Messer, 2013) and the Career Thoughts Inventory (CTI; Sampson et al., 1996a) can help shed

some light on client needs in this area. Now that we've briefly reviewed the core elements of CIP theory, let's look at how Holland's RIASEC theory concepts and instruments help us better understand a person's unique "pyramid."

What's Involved in Career Choice

Knowledge About Self

An essential component of the career counseling process is helping clients gain a clearer understanding of themselves, including their skills, values, and interests. The SDS has proven to be a valuable tool in this regard for many years. Numerous studies support the notion that clients report understanding themselves better after completing the SDS. The SDS and Holland's typology give them a clear and concise way to think about their personal characteristics and provide a framework for describing themselves that is easily understood. The SDS does this in several ways.

The SDS Daydreams section is sometimes minimized or even ignored in practice and research. This list of daydreams is the first "window" into a client's view of self. The client's daydreams may represent both a realistic view of self (i.e., clients list options they could actually see themselves doing) and a "flight of fantasy" (i.e., occupational dreams clients may still hold or ones they've abandoned). In either case, these daydreams provide an initial means for clients to project their view of themselves onto career choices. Discussion of these daydreams can reveal important aspects of self-knowledge. Do they represent things the client likes and enjoys doing? Do they represent some important values the client holds (e.g., a need to make a difference in the world or a need for power, prestige, or money)? Do they capture some skills the person has or wants to develop? Daydreams often contain important information that is not always captured by more structured assessments.

Further, practitioners can examine clients' "expressed" view of themselves (the Daydreams summary code) in relation to their assessed view of themselves (three-letter SDS summary code) by examining the level of congruence between the two codes. How big a gap exists between clients' skills, interests, and personality characteristics and what they say they want to do? Practitioners know from experience that their work is made easier when what clients can see themselves doing matches their self-perceptions. The SDS can provide some valuable clues about the clarity and accuracy of a person's self-knowledge.

The other SDS sections also provide a quick and simple means for practitioners to gather information about how clients see a variety of their personal characteristics. The SDS Assessment Booklet sections mirror the kinds of things practitioners might do when sitting down to interview clients. The practitioner would ask about things clients enjoy doing (Activities), the kinds of things they do well (Competencies), the kinds of occupations they've considered, and their estimates about their strengths in various areas. Although the Occupations scale deals with clients' views about particular options, their endorsement or rejection of those items provides clues to their self-perceptions (e.g., they reject Realistic occupations that seem to lack prestige), and how well their view of themselves matches or doesn't match with a particular occupation.

Clients' reactions to both the occupations listed in the Occupations scale and the occupations associated with various combinations of their three-letter code are also an important link to self-knowledge. Clients' reasons for liking or disliking the options presented can reveal

important themes about personal preferences and self-knowledge. They reject an option presumably because it is not consistent with how they see themselves, either now or in the future. For example, clients might utter such phrases as "I can't see myself doing that," or "None of these options fit me." Further exploration and elaboration of the thoughts and feelings behind these statements can help fill in the self-knowledge side of a client's pyramid.

A link also exists between self-knowledge and Holland's concepts of differentiation and consistency. Persons with flat profiles or low levels of differentiation may have had insufficient experience to acquire well-defined interests, competencies, and self-perceptions (Holland, 1997; Reardon & Lenz, 2015). Clients who think they don't know themselves very well may have trouble rating themselves in the various sections of the SDS. With regard to consistency and the relationships among RIASEC codes, practitioners can explore how well clients' personal characteristics "hang together." Do their patterns of skills, interests, and values form a consistent pattern (e.g., do they work well with people, enjoy working with people, value working with people, and have high scores on the E and S scales)? This pattern can be contrasted with clients who have had ambiguous or conflicting life experiences which in turn may produce inconsistent codes on the SDS (e.g., a person with a code of CA who works in a clerical position for a state agency but sings in a choral group on the weekends).

The SDS is not the only tool that can be integrated with CIP theory to explore self-knowledge. For example, self-knowledge is also reflected in scores on the My Vocational Situation (MVS; Holland et al., 1980) and CTI which are discussed later. Holland developed the MVS as a quick measure of readiness to engage in career or educational planning. The MVS can be completed in five minutes or less and provides a measure of a person's vocational identity (a clear, stable picture of one's interests and skills), need for information, or barriers to career planning. Lack of self-knowledge is also reflected in lower vocational identity scores or higher CTI scores, a tool already developed within the context of CIP theory. Several of the items on the MVS Vocational Identity scale reflect issues related to self-knowledge (e.g., "I don't know what my major strengths and weaknesses are," or "My estimates of my abilities and talents vary a lot from year to year.").

This section has helped us see how a number of concepts embedded in Holland's theory and the SDS can help us work with clients in exploring self-knowledge related to CIP theory. In fact, the SDS has been shown to integrate across a variety of theories that seek to illuminate self-knowledge. Bullock-Yowell and Reardon (2022) illustrated this in showing how the SDS could be used in career construction counseling. Next, we'll discuss how these same concepts can help us examine the client's knowledge of occupational, educational, and leisure options.

Knowledge About Options

An essential aspect of many career interventions is helping clients to think about options. For some clients, the goal is to narrow down the number of options they're considering; for others, the goal is to increase the number of options they might consider. In CIP theory, options knowledge refers to knowing about specific occupations, fields of study, jobs, as well as understanding how the world of work is organized (Sampson et al., 2020). Some scholars (Krumboltz, 2009; Rudolph et al., 2019) have suggested that it is futile in today's changing work environment to think about and explore specific options, but the reality is that our educational and work organizations still require people to identify specific options they are considering (e.g., declaring a college major, applying to a specific job, etc.).

As noted earlier in this chapter, the SDS helps clients explore options in several ways. First, by including the Daydreams section as the initial activity, the SDS recognizes that clients have some useful and interesting ideas about options, and these options are often very predictive of the career fields they eventually enter. Letting clients list options without any external stimulus can give practitioners insight into the clarity or complexity of clients' "occupational maps" (i.e., what views of work do they carry around in their heads?). Some clients can quite easily fill up all of the slots in the Daydreams section with very specific occupational alternatives, whereas others have trouble listing more than a few, and sometimes the items they do list are vague in nature (e.g., management, psychology, sales). Holland's concept of coherence might also be considered here. Have clients selected alternatives from the same job family or do their aspirations reflect options that are quite different from one another with respect to RIASEC types? If clients' daydreams are quite varied and distinct from one another, exploring this may provide important information about how they view options or, in CIP theory terms, their occupational map or schema.

Second, if clients complete the Daydreams section as directed and look up the codes for their daydreams in the *StandardSDS Occupations Finder* (Holland & Messer, 2017), they are immediately involved in an activity that expands their knowledge about "what's out there." For some clients, looking through the *StandardSDS* can be challenging, but from our perspective, that's not necessarily bad. It may become problematic for some people who are already overwhelmed by the number of options they have to consider, but for most clients it is an interesting and eye-opening experience.

Third, the SDS provides clients with an opportunity to consider and evaluate options through their responses on the instrument's Occupations scale and in their review of options associated with their three-letter summary code. Client reactions to occupational titles provide important counseling information in two forms:

1. Their discussion of options may reveal the clarity of their thinking about the world of work, the nature of work, and their view of themselves in relation to particular types of work.

2. Their discussion of options may reveal occupational stereotypes that could potentially interfere with their ability to make good career choices.

An example might be a female student who dismisses engineering as a career option because she believes that there is too much math involved or that it is a field less open to women. Or a practitioner is working with an unemployed auto industry worker who dismisses Radiation Technology as a retraining option because it's a "woman's job" and "the pay is low."

Exploration of options is also affected by the "commonness" associated with SDS codes. Clients with rare codes (often with the first and second letters that are opposite on the RIASEC hexagon) may be frustrated by the few or unusual options listed for their code and may need help in exploring additional alternatives. An alternative scenario is that of a client who has a very common code, one that is associated with a variety of occupations (e.g., SEC). The code SEC and all its combinations generates a total of 175 options for a client to consider. For some clients, if their goal was to expand the number of options they might consider, this may be more than they bargained for! For clients trying to narrow their options, it is potentially overwhelming and frustrating.

Clients who specifically state that they're trying to narrow their choices and are determined to take an interest test to help them do this may benefit from a "sneak preview" of their potential SDS results. For example, if they reviewed descriptions of the six types and identified their code as ESA, we might pull out a copy of the *StandardSDS Occupations Finder* and show them the lists of alternatives for this code combination. This lets them know that their experience with the SDS may produce the opposite result (i.e., more choices instead of fewer). They can still proceed with that activity, or they may choose to simply explore some of the options they already have in mind.

Finally, in defining options knowledge, we noted that this aspect of the CIP pyramid comprises not just knowledge about specific alternatives, but also refers to having a way of thinking about how options are organized. With the thousands of alternatives that exist for clients to choose from, having a way to think about more manageable groups of options becomes extremely important. We are referring to a cognitive schema in CIP theory terms, a map or method for classifying and organizing facts and ideas. One of the most important elements of Holland's theory and his instruments is the RIASEC typology and the accompanying hexagon figure. Although the number of letters, the descriptions of the types, and the shape of the hexagon have been widely debated and researched, the authors have found, in our roles as practitioners and researchers, that both clients and practitioners find this figure extremely helpful. People understand it and relate to it easily. The RIASEC typology has been incorporated into many other career intervention resources because of its practicality and usefulness.

As clients talk about options in relation to their SDS results, both the ones they've generated and the ones presented to them in the Assessment Booklet and the *StandardSDS Occupations Finder*, this information can be used to help them fill in the right side of their pyramid. Taking the self- and options knowledge gained from the SDS and translating it into a choice leads us to our next topic, the CASVE cycle.

Decision-Making: The CASVE Cycle

Most practitioners have worked with one or more decision-making models to help their clients in the career choice process. In CIP theory, the CASVE cycle (pronounced Ca SA' Veh) is one such model and is shown in Chapter 2. We like to use it because it represents a process that clients can understand and apply. It appears to emphasize a logical, rational approach to decision-making, but it recognizes the role that feelings and intuition play in this process. The model also recognizes the role that significant others and other contextual factors play in some clients' career problem solving and decision-making.

As noted in Chapter 2, the simplest way to think about the CASVE cycle is as the means by which clients recognize and solve a career problem; they need to resolve the "gap" between where they are now and where they'd like to be. An example of this is a college sophomore who is undecided about a major and would like to select a satisfying major by the start of the junior year. Another example is a downsized computer industry worker whose unemployment benefits run out in 3 months and who wants to make a decision about enrolling in a training program.

In the Communication phase of the CASVE cycle, practitioners may need to assess the clients' readiness level to engage in self- and occupational assessment activities (Sampson et al., 2020). As noted in Chapter 4 of this book, such tools as the Career State Inventory (CSI; Leierer et al., 2022), the Career Thoughts Inventory, and the MVS can help in this process.

In the *Analysis* (A) phase of the CASVE cycle, where clients try to gather and fully understand all the relevant information associated with their choice, the SDS can be used to help clients quickly pull together information about themselves and information about possible options.

In the *Synthesis* (S) phase of the CASVE cycle, clients engage in activities that help them expand (elaboration) and narrow (crystallization) their options. Most clients using the *StandardSDS Occupations Finder* (Holland & Messer, 2017b), either as part of the Daydreams activity or as part of exploring alternatives associated with their SDS summary code, will find their options increase. Holland's "Rule of Full Exploration" (Holland & Messer, 2013) also assures Synthesis elaboration by encouraging clients to use all combinations of their SDS summary code to identify potential occupations and fields of study. *Synthesis crystallization*, on the other hand, occurs after clients have researched and processed information about options and are ready to narrow their list to a more manageable number. The idea is to carry forward three to five options into the next phase of the CASVE cycle. Once clients have created a list of options, how do they get to a point where they are able to commit to a first choice and execute a plan for implementing that choice? This is where the CASVE cycle's *Valuing* and *Execution* phases come into play.

In the *Valuing* phase, clients consider the three to five options that have been generated and weigh the pros and cons of each. They may weigh these alternatives in terms of the costs and benefits of each option to "themselves, significant others, their cultural group, and the community or society in general" (Sampson et al., 1996b, p. 9). This process results in clients' *prioritizing* their options so that they have a first choice and a "Plan B" or "Plan C" in case the first choice doesn't work out.

At this stage, choices are still considered tentative because further exploration through training programs, short-term experience (e.g., internships, or job hunting) may reveal that a choice is unattainable or inappropriate (Sampson et al., 2020). These activities and external action associated with a decision are accomplished in the next step in the CASVE cycle, *Execution*. In this phase, "clients are concerned with creating and committing to a plan of action to implement a first choice" (Sampson et al., 2020, p. 11).

How then do practitioners work with clients in the Valuing and Execution phases of CIP theory, and what role can the SDS play in helping them through these parts of the process? In our experience, these steps are probably the most neglected aspect of the career intervention process. This is particularly the case when practitioners work in settings that do not have any "outside world" links (e.g., information resources on occupations and educational programs, opportunities for reality testing such as internships and volunteer opportunities, employer information, job listings, and so forth). By fully using all the components of the SDS as an intervention, however, practitioners can begin to help clients successfully negotiate this step into the "real world." Holland, in effect, built "Valuing" and "Execution" activities into the SDS Assessment Booklet (Holland & Messer, 2017a) and its companion booklet, *You and Your Career* (Holland & Messer, 2017c).

The Assessment Booklet section entitled "Some Next Steps" encourages clients to engage in such activities as investigating options more thoroughly, learning about educational requirements, and weighing personal factors that may affect choices (e.g., physical limitations,

gender, family history, other personal or intersecting identity influences). The *You and Your Career* booklet also speaks to this process of exploring, prioritizing, and implementing choices.

In an ideal world, where clients are completely self-directed, they would faithfully follow these next steps. However, we know from experience that this is often not the case. Practitioners may want to consider making these next steps a more explicit part of the "contract" with their clients. They could be a weekly "homework assignment" and be included on an Individual Learning Plan (see Chapters 2 and 7). These items might also be the basis for practitioner-client discussions in ongoing sessions. The SDS Assessment Booklet, when used in the intended manner, provides a strategy for clients to use in fully exploring, evaluating, and choosing among options. In our experience, these SDS components are often overlooked or at least underused and can play an important role in moving clients through the Valuing and Execution phases of the career decision-making process.

Executive Processing or Thinking About Thinking

As we noted earlier, a topic that continues to receive attention in both the counseling and career counseling fields is the impact of thoughts on both feelings and behaviors (Bullock-Yowell et al., 2012; Galotti, 2019). In other words, how we think affects our emotions and how we behave. Sometimes, despite our best efforts to assist clients in obtaining self-knowledge, knowledge about options, and developing a decision-making strategy, they are still stuck. What accounts for this? Why didn't the intervention work?

We have come to believe that part of the answer could be found by "looking inside our clients' heads," or asking, "What are they thinking and feeling? How do they view themselves in this process? How are their thoughts, feelings, and mental health status influencing their ability to make progress in solving their career problems?" Our early experiences using the SDS and the MVS in our career center also confirmed some of our ideas along these lines. On the one hand, we would see very positive signs on clients' SDS results. They seemed to know themselves and were considering options that fit well with their personal characteristics. On the other hand, they had very low vocational identity scores on the MVS. We referred to this as "awfulizing," meaning that despite the fact that they had options and seemed to know themselves, these clients presented themselves as needing a great deal of help. They came for services using such phrases as "I'm really confused," "I have no idea what I want to do," and "I need lots of help." Or they would comment after completing the SDS, "This really didn't help me." You may have heard one or more variations on these themes in your own practice. Our work with CIP theory helped us to identify this aspect of the career problem-solving process, executive processing, as an important missing piece.

As clients "process the process" of making career choices, several cognitive activities described in CIP theory may enhance or impede their ability to successfully resolve their career concern. CIP theory's "executive processing domain is concerned with metacognitive functions including self-talk (silent observations by individuals regarding their progress in decision-making that can be perceived as positive or negative), self-awareness (the extent to which individuals are aware of themselves as decision makers, including the potential impact of self-talk), and monitoring and control (the extent to which individuals are able to monitor their progress in decision-making and control the impact of negative self-talk)" (Sampson et al., 2020, p. 9). There are several ways clients may experience difficulty in this area. First, they may not view themselves as being able to do this task well (e.g., "I'm not confident I can make a good

choice."). They lack confidence as a career problem solver and decision maker. Second, they overwhelm themselves with "shoulds," "oughts," and "musts" (e.g., "I must make the right career choice."). Third, they may be depressed or anxious about ever finding a satisfactory solution to their career concern or may deal with depression, anxiety, or mental health concerns that impact many arenas of their lives. Fourth, they seem unable to persist in the activities required to complete the problem-solving task, and they cannot maintain their focus and energy. Finally, they may be overly reliant on external forces to solve their problems (e.g., a significant other in their lives) (Sampson et al., 1996b).

Those clients experiencing difficulty in the executive processing domain would be expected to exhibit low levels of vocational identity measured by the MVS and to have a number of negative indicators on SDS interpretive factors. Our observations of clients with these patterns of negative thoughts led us to develop the CTI which can be used as a brief objective measure of the impact of these thoughts on their career problem-solving and decision-making process. We also acknowledge that many individuals face barriers in career decisions not shared by everyone. These barriers could be associated with racism, ongoing mental health concerns and related factors (e.g., ADHD, trauma, depression, anxiety), or perceptions of how they fit in the world. We believe that issues and barriers like these can be addressed in conjunction with the CIP theory-based career counseling approaches described throughout this book. The readiness and mental health factors described in Chapters 4 and 10, highlight the need for practitioners to be aware when some clients may benefit from some general mental or behavioral health counseling prior to engaging with career interventions.

Career Thoughts Inventory and Career State Inventory

As noted in Chapter 4, readiness for career decision-making is a component of cognitive information processing theory (CIP; Sampson et al., 2020) that alludes to the extent of one's preparation for deliberate and effortful career problem solving and decision-making (Bullock et al., 2015). From a CIP theoretical perspective, readiness consists of two dimensions, capability and complexity (Sampson et al., 2020). Chapter 8 of the book provides more detail on CIP measures that assesses readiness. In this chapter, we'll briefly highlight two of those measures, the Career Thoughts Inventory (CTI) and the Career State Inventory (CSI) to demonstrate how they can be linked to Holland's RIASEC theory.

The Career Thoughts Inventory (CTI) is a "theory-based assessment and intervention resource intended to improve the quality of career decisions made by adults, college students, and high school students, and the quality of career services delivered to these clients" (Sampson et al., 1996c, p. 1). Consisting of 48 items covering each area of the pyramid and the CASVE cycle, the CTI provides a total score and scores on Decision-Making Confusion (DMC), Commitment Anxiety (CA), and External Conflict (EC). It can be used as both a screening and a needs assessment measure, and when accompanied by the *CTI Workbook*, can be used as a learning resource to help clients identify, challenge, and alter their negative thoughts.

The Career State Inventory (CSI; Leierer et al., 2022) is brief questionnaire that assesses one's capability to undertake career decision-making and it measures three constructs, (a) certainty about a career goal, (b) satisfaction with a goal, and (c) vocational clarity and confidence in pursuing one's career and life goals. As a measure of capability, CSI results may identify individuals who are uncertain, dissatisfied, and/or confused regarding a career goal. Such persons may well lack the capability to engage effectively in career exploration without

assistance from a qualified career practitioner. The complexity aspect of readiness alludes to elements of individuals' personal, social, and economic contexts in which career decisions are made. An assumption is that individuals should not only possess the capability necessary to engage in the challenging process of career problem solving and decision-making, but also be able to manage the complexity of one's life circumstances that bear on the decision. Additional information about the CSI is available at Leierer et al. (2022), *The Career State Inventory (CSI) as a Measure of the Career Decision State and Readiness for Career Decision Making: A Manual for Assessment, Administration, and Intervention (Third Edition)*.

Preliminary screening of clients using an instrument such as the CTI or CSI may help practitioners assess their ability to benefit from an intervention such as the SDS. Readiness assessment may also help identify where in the career choice process clients may be having trouble. Practitioners can use CSI, CTI, and SDS results to help clients see where they may be stuck and what activities may be needed to get them unstuck, and to enable them to learn and apply the skills needed for successfully engaging and solving their career problems. In addition, it may be noted that the MVS Identity scale and the CTI total score are highly negatively correlated, i.e., low identity scores are highly correlated with high CTI scores (Sampson et al., 1996b). This relationship between the CTI and the MVS provides another link between RIASEC and CIP theories.

Connecting CIP and RIASEC Theories via Research

As noted in the introduction to this chapter, the synergistic relationship between CIP and RIASEC theories is unique in the fields of vocational psychology and career development. In this section, we highlight selected research studies that further illustrate the integration of theory, research, and practice through the lens of CIP and RIASEC.

One of the first published reports was a case study of "Mandy," a college student who was deciding about a major and a future career (Reardon & Wright, 1999). The authors described how a career planning class using the Self-Directed Search (SDS; Holland et al., 1994), the Career Thoughts Inventory (CTI; Sampson et al., 1998), and *Improving Your Career Thoughts: A Workbook for the Career Thoughts Inventory* (Sampson et al., 1996c) were used as interventions to allow Mandy to become aware of her negative thinking patterns and to begin the process of reframing these thoughts in more positive directions for action. The outcome of Mandy's case, her personal reactions to the published article, and some practical implications for other service providers, are discussed in the article.

Later, Wright et al. (2000) provided a detailed examination of the relationships among constructs in the CTI and the SDS. The article focused on how dysfunctional career thinking as measured by the CTI can interfere with the matching process inherent in Holland's SDS. A canonical correlation analysis showed that dysfunctional thinking, e.g., Decision-Making Confusion, may affect some RIASEC types, e.g., Social and Investigative interest areas, more than others, and implications for career counseling were discussed.

Chason et al. (2013) investigated the relationships among negative career thoughts, profile elevation and differentiation scores on the Self-Directed Search, and the career decision state, including level of decidedness and satisfaction with choice. Participants were 226 undergraduate students enrolled in a career course. Measures included the Career Thoughts Inventory (CTI) for career thoughts, the Self-Directed Search (SDS) for profile elevation and

differentiation, the Career State Inventory (Occupational Alternatives Question was used for career decidedness, and the Satisfaction with Choice item was used for level of satisfaction with career choice). Negative career thoughts were found to account for a significant amount of variance in profile elevation, career decidedness, and satisfaction with choice.

Kronholz (2015) used a case study report to describe a self-help career intervention guided by cognitive information processing theory and Holland's (1997) RIASEC theory. The report described a college student seeking help in exploring educational and occupational options and provided an example of determining client readiness to engage in career services. The career advisor used a series of questions based on CIP and RIASEC theories, as well as an information library, to assist the student with decision-making. It also demonstrated an effective method for translating theory to practice without using formal career assessments. The outcome of the intervention supported a differentiated model of career services that increased client accessibility to those services.

Reardon (2017) elaborated on the application presented by Kronholz by indicating that contemporary career theories, cognitive information processing theory (CIP), and Holland's typological theory (Realistic, Investigative, Artistic, Social, Enterprising, Conventional [RIASEC]), provide ideas and tools for informing self-help career services. For example, CIP theory includes self-help among three levels of career service delivery. Readiness screening included in both theories is the mechanism for determining which individuals can benefit from differentiated services, for example, self-help, brief staff assisted, and individual case managed. Reardon showed how these theories can be used in career assessment and described tools and procedures for service delivery. (Further details about this approach are provided in self-help sections of Chapters 7 and 14 in this book.)

Dozier et al. (2019) conducted an exploratory study of a self-help intervention, the online Self-Directed Search Form R Fifth Edition (SDS) based on RIASEC theory, with 114 undergraduate students at three levels of career decision state or readiness for career decision-making. The effects of this intervention examined included (a) changes in three levels of the career decision state measured by the CSI related to CIP theory, low ($d = 1.14$), medium, ($d = .14$), and high ($d = .17$), over a three-week time period; (b) the extent of engagement in the task of taking the SDS and reviewing the reports; and (c) attitudes regarding aspects of the experience itself. Results showed a significant, positive impact of the online SDS with non-client students who were in a low career decision state (high career uncertainty, high career dissatisfaction, low career clarity) regarding their career goals and aspirations. Regardless of the students' career decision state, the majority of students engaged the opportunity to further explore their interests through the SDS and reacted positively to the experience.

Finally, Dozier et al. (2020) examined the career decision state (CDS) as measured by the CSI in relation to RIASEC (Realistic, Investigative, Artistic, Social, Enterprising, Conventional) profiles in Self-Directed Search. The sample included 113 college students (86 women, 27 men). Three CDS dimensions measured by the CSI (certainty, satisfaction, and clarity) were examined as predictors of RIASEC primary and secondary constructs. Significant, albeit modest, zero-order correlations ($p < .05$) emerged between clarity and 3 secondary constructs (i.e., consistency, commonness, and coherence). Results of regression analyses indicated that CSI dimensions predicted 1 secondary construct (i.e., commonness).

Altogether, these selected studies provide additional empirical evidence of the relationships among constructs in CIP and RIASEC theories and implications for career services. We believe this line of research connecting two career theories informs the work of career practitioners. Additional research to further understand the relationships among variables of interest across diverse populations is ongoing.

Connecting RIASEC and CIP Theories in a Personal Career Theory

Holland's RIASEC theory is especially strong in connecting the self- and occupational-knowledge domains, and CIP theory is strong in describing the metacognitions, the thoughts, and beliefs in the executive processing domain that govern the career decision-making and problem-solving processes. Together, these two theories help counselors unravel the "personal career theory" (PCT; Holland, 1997) that clients bring to the career services process. In the following paragraphs, we will explore the idea of a PCT and the role it plays in career interventions, including counseling.

Partly in response to the criticism that RIASEC theory was silent about career counseling processes, Holland (1997) suggested that everyone has a PCT about careers or work, which can range from weak and invalid to complex and good. When a PCT fails, a person seeks outside career assistance, and a successful career intervention helps a person revise or implement their PCT. Holland (1997) viewed most PCTs as having elements of the RIASEC typology (e.g., personal characteristics related to occupational structures, as well as beliefs and strategies for achieving work and nonwork aspirations that flow from a special life history).

Practitioners can become informed about a client's PCT by using card sorts, by completing the SDS Daydreams section, by listening to the client's career history, and by understanding the client's present career difficulty. The typology may be assessed with the SDS, and the beliefs and strategies (career thoughts) can be measured with the CTI. Holland (1997) speculated that one reason for the popularity of RIASEC theory is that it helps clients improve the typologies in their own PCT. We believe that the CTI proved to be useful to clients and practitioners because it helped clients become aware of how negative thoughts may interfere with their successful career decision-making. PCTs can be improved by using the SDS and related Holland-based interventions (Reardon & Lenz, 2015), and by using the CTI and the *CTI Workbook* (Sampson et al., 1996c).

Holland (1997) suggested that most career interventions are successful because the average client has a PCT with a moderate degree of validity. As a result, clients need relatively little help to implement their PCTs. On the other hand, clients with flawed, dysfunctional PCTs may need more extensive assistance. Holland thought that problems stem from the three parts of the PCT: personal characteristics, occupational knowledge, and translation units. In CIP terms, these are defined as the knowledge domains and the decision skills domain. Holland believed that persons having a PCT with a weak translation unit (i.e., poor CASVE decision-making skills) or pervasive weaknesses (i.e., many negative career thoughts on the CTI) require more intensive career assistance.

Finally, practitioners can use a client's PCT to help determine how to provide career assistance. "The active and sensitive pursuit of a person's PCT may foster some of the counseling qualities that usually lead to effective individual counseling: respect for the client,

genuineness, and empathic understanding" (Holland, 1997, p. 208). And the ideas, instruments, and materials provided by RIASEC and CIP theories can help clients improve their PCTs.

Chapter 5 Summary

This chapter has provided links between two career theories, cognitive information processing (CIP) theory and Holland's RIASEC theory. The marriage of these theoretical ideas with practical and research applications provides practitioners with novel and powerful tools for use with their clients. Holland's RIASEC typology works especially well in linking self- and options knowledge, and other Holland instruments such as the SDS enable us to learn more about how a client might be approaching the career decision-making process. CIP theory, represented by the pyramid of information processing domains, the Career Thoughts Inventory (CTI), and the CSI, help improve our understanding of the cognitive processes at work in career problem solving and decision-making, including the CASVE cycle and the executive processing domain.

Getting the Most Benefit from Reading Chapter 5

To effectively learn the material in this chapter, complete one or more of the following activities:

- Create a table to highlight the similarities and differences between the two theories.

- Describe key connections between CIP and RIASEC theory that might relate to your work with clients.

- Think about your own career history. Consider how elements of CIP and RIASEC theory intersect over the course of your experiences.

- Read further information, provided in the sources below, on using CIP and RIASEC assessments in providing assistance to clients.

- Access CIP and RIASEC resources on the FSU Tech Center website to expand your understanding of how these theories can be integrated in research and practice: https://www.career.fsu.edu/tech-center/topics/career-theory-research-and-practice

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CHAPTER 6
DIVERSITY AND CIP THEORETICAL CONCEPTS

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This chapter examines the development and potential impact of various aspects of
diversity on persons' career choices from the perspective of cognitive information processing
(CIP) theory (Peterson et al., 1991; 2002; Sampson, 2008; Sampson et al., 2004; 2020; 2023).
CIP theory's pyramid domains and the CASVE cycle, examined in detail in Chapter 2, and
readiness for career decision-making, discussed in detail in Chapter 4, structure the chapter's
content. The chapter begins with a clarification of how diversity is conceptualized and continues
with an examination of diversity variables and the pyramid of information processing domains
and the CASVE cycle, followed by an exploration of diversity and readiness for career decision-making. A case study is provided to show the application of the above concepts in practice. The

chapter concludes with a summary and recommendations for getting the most benefit from Chapter 6.

Conceptualization of Diversity

Before examining diversity and career choice from a CIP theory perspective, it is important to specify what we mean by diversity. Diversity encompasses differences among individuals based on demographic characteristics including age, disability, ethnicity, first generation status, gender identity, geographic location, immigration status, indigenous background, nationality, race, religion, sexual orientation, sex assigned at birth, socioeconomic status, and others (Hays, 2022). Individuals who possess marginalized identities or multiple marginalized identities (i.e., intersectionality; Grzanka et al., 2017) are at greater risk for poorer career outcomes (Brewster & Molina, 2021). Many experiences that marginalized individuals have throughout the lifespan may negatively impact their career development process and opportunities. For example, individuals from lower social class backgrounds may attend lower quality schools, which later may impact the ability and the decision to attend college. Another example is the case where being Black intersects with being from a lower social class background further narrowing options and reducing the chance of desirable career outcomes. Hence, considering diversity when examining clients using CIP theory is vital.

Diversity and the Pyramid of Information Processing Domains and CASVE Cycle[18]

Over time, we have become more aware of important differences in how clients' identities and backgrounds engage the respective domains of the pyramid and the CASVE cycle phases in career problem solving and decision-making. For practitioners to gain a sense of how diversity is integrated within CIP theory, the following discussion presents examples of multicultural considerations according to the pyramid domains and the CASVE cycle (Peterson et al., 2002, Sampson et al., 2004; Sampson et al., 2020).

The Self-Knowledge Domain

The development and refinement of self-knowledge must be considered within the context of individuals' diverse backgrounds. Power and privilege may open or prevent opportunities through which people can explore interests, gain knowledge, and build skills (Juntunen, 2020; Lapour & Heppner, 2009). For example, those from lower social class groups may have limited opportunities to explore careers and evaluate similarities/differences to their own interests, values, and skills (Bradley et al., 2001).

Discrimination has been defined as "the unfair or prejudicial treatment of people and groups based on characteristics such as race, gender, age, or sexual orientation" (American Psychological Association, 2022). In addition to the four characteristics noted above, individuals may also be discriminated against based on a diverse range of identities, including disability, first generation status, gender identity, geographic location, immigration status, indigenous background, nationality, religion, sex assigned at birth, socioeconomic status, and others. Research on racism has shown that these experiences lead to more negative career outcomes for people of color (Fouad & Kantamneni, 2020; Rollins & Valdez, 2006). Moreover, scholars have

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[18] Content in this section was used or adapted from Sampson et al., (2004). Used or adapted with permission.

shown that women also experience barriers in the world of work (Bimrose, 2019; Schultheiss, 2020), and individuals who are the first in their family to attend college are more at risk of failing to graduate (Garriott, 2020). These experiences can subsequently limit employment opportunities.

Another important consideration in the self-knowledge domain is cultural values (Tang, 2019). One way to conceptualize cultural values is on an individualistic and collectivistic continuum (Segall et al., 1998). Cultures that value individualism such as the United States, Australia, and the United Kingdom tend to place the success of the individual over the success of their group (Singelis et al., 1995). Contrasted against individual-centered perspectives, individuals who originate from Eastern, as well as Latin American and Caribbean communities (i.e., collectivistic cultures) tend to place the success of the group over the success of the individual (Singelis et al., 1995). In these cases, individuals may consider their group or family when making career decisions. Questions that individual may ask themselves include, "What decisions are best for my family and our success? These questions are especially important during the Valuing phase of the CASVE cycle, discussed later in this chapter.

It is important to note that some aspects of diversity may be less visible to others (e.g., social class) than others (e.g., race). However, although social class may be invisible, it can be just as influential on career outcomes. Social class backgrounds may impede available career opportunities (Diemer & Rasheed Ali, 2009; Juntunen, et al., 2020). It may mean that a graduating senior from high school may need to enter the workforce when they graduate to assist their family, instead of pursuing future educational importunities that may lead to higher paying jobs. Other identities such sexual orientation and gender may also be invisible, but influential on career (Gelso & Williams, 2022). Some research has demonstrated that sexual and gender minorities have additional career development barriers than those not marginalized based on sexual and gender identity (Velez et al., 2021).

The Options Knowledge Domain

Diversity issues in the acquisition of options knowledge relate to (a) the breadth of experience and opportunity to learn about the nature of the world of work, (b) the meanings and attitudes attached to the knowledge acquired, and (c) the processes through which occupational knowledge is assimilated and stored. If individuals early in life are exposed to restricted environments in which family members and adult role models work, it is likely their firsthand knowledge of the world of work may also be narrow (Robinson & Howard-Hamilton, 2000; Tang, 2019). In CIP theory terms, the options knowledge schemata of those from restricted environments may lack resources and access to career information, which in turn, can limit knowledge about options (Gomez & Beachum, 2019). For example, Parks-Yancy (2012) found that first generation Black college students indicated fewer career options as compared to peers. Furthermore, if options knowledge is assimilated and associated with negative attitudes and stereotypic thinking, the world of work may not be seen as a place where one's potential can be realized but as a threatening, oppressive place with few financial or social rewards. Other influencers that may negatively impact options knowledge include experiences with discrimination related to specific demographic characteristics such as race, gender, or socioeconomic status (Lease, 2004).

Multiple studies (Adebowale, 2014; Chin; Gomez & Beachum, 2019; Jenkins & Jeske, 2017; Oymak, 2018) indicate that children and adolescents learn about options mainly from

interactions and conversations with others, such as parents/family, people in their community and schools. Not all of these may be equally important to every client. For example, Oymak (2018) found that students from higher social class backgrounds relied more on family backgrounds or themselves, whereas those from lower social class backgrounds relied on teachers or counselors. Young and Valach (2004) suggested that the questions a person asks about a career option are influenced by values instilled and supported by important others in their lives. Also, perceived financial stress has been related to lowered hope and a lack of career goals among adolescents (Thompson et al., 2016).

Work experiences as an adolescent can expose a person to various types of environments and thus inform them not only about work environments in general or what work tasks are associated with specific jobs, thus building their options knowledge, but also informs self-knowledge as they try out their interests and skills, and see work-related values emerge (Rojewski, 2020; Zimmer-Gembeck & Mortimer, 2006). Someone who has limited opportunities to engage in these work experiences, perhaps due to discrimination, or other priorities, can have a deficit in terms of the benefits of this first-hand exposure (Tang, 2019). Social class can also impact access to meaningful work. Autin and Allan (2020) found that those with lower social class privilege desired meaningful work as much as those from higher socioeconomic status but reported experiencing more frequent barriers to accessing meaningful work, partially because they needed to attend to basic needs.

Finally, members of certain cultural groups may acquire occupational knowledge more effectively through social groups rather than an individual construction process (Lyddon, 1995). Thus, learning about options within closely connected family and community groups may be more meaningful and relevant than learning individually from print or other media resources typically available in career centers (Fouad & Arbona, 1994).

The Decision-Making Skills Domain

Important diversity issues are present in the career decision-making process as well as each phase of the CASVE cycle. In the Communication phase, members of diverse groups must become aware of and explore the affective components in the problem space that result from institutional and cultural bias, racism, and oppression in education and work. In the Analysis phase, members of diverse groups may internalize the discrimination they experience and thus externalize the career problem: "I'm undecided and don't know what to do, but because of society's racism and oppression, it really doesn't matter what I do." Incorporating unique aspects of the client's cultural background, social identities, and knowledge of/experience with environmental responses (positive and negative) that inform their self and options knowledge into the career conversation may deepen the understanding of how these may bear on, create challenges, or provide support for their career decision-making. In Synthesis, members of diverse groups may be drawn either to familiar occupations that they have been exposed to through media or their social circles. In the Valuing process, an important consideration involves the relative balance in importance between one's own beliefs and the influence of significant others or the cultural group in making a career choice (Fouad & Arbona, 1994). Finally, in the Execution phase, a common issue is confronting and overcoming resistances and constraints of cultural or racial bias and prejudice in the workplace as one reality-tests an occupational choice. At each phase in the CASVE cycle, individuals must identify and resolve diversity-related issues, if they are present, for effective career problem solving and decision-making to happen.

Decision-making skills are acquired over time and through practice. Some social experiences may assist or prevent individuals from developing these skills. This would be especially true of those who have little volition in their choice (Duffy et al., 2016). Systemic barriers may create difficulties to decision-making (Autin et al., 2018; Conkel-Ziebell et al., 2019), that have long-term career development implications.

The Executive Processing Domain

Diversity issues in this domain involve the nature of metacognitions, especially self-talk, that regulate lower-order cognitive processes in the pyramid of information processing domains. Personal, social, and environmental factors such as family, cultural background, social class, and systemic issues such as opportunities/barriers related to power and privilege may interact and impact how a person "sees" themselves and what are/are not options for them (Howard et al., 2015). Biases and internalized discrimination will impact how individuals perceive themselves and the world of work (Levin & Gati, 2015). Ultimately, self-defeating, or negative self-talk severely limits or distorts the generation and evaluation of career options, which may, in turn, lead to inappropriate actions or inaction. Such phrases as "I can't because I'm . . ." or "Yes, but members of my group . . ." alert a career practitioner to challenges in the executive processing domain. Members of marginalized groups need to be aware of any metacognitive constraints that inhibit progress through the phases of the CASVE cycle due to internalizing experiences of discrimination. It is challenging to balance the constraints placed on the individual because of their identities versus self-developed constraints. Cognitive restructuring, as well as systemic interventions such as advocacy, networking with active minority support organizations, and securing legal advice, may help empower individuals to develop and apply more-positive self-statements and feelings of self-confidence in career problem solving and decision-making. For example, a more constructive thought might be "In spite of the racism I see in my workplace, there are ways I can network with others to gain support and identify ways of advancing."

Diversity and Readiness for Career Problem-Solving and Decision-Making

Individuals will vary in their capability and the complexities surrounding their career concern, regardless of cultural and social identities. However, differences do exist for both of these domains. For example, Mau (2004) found that Asian high school students expressed greater difficulties in making a career decision than other cultural groups. Readiness may be further complicated for those who have experienced marginalization because of their identities, as mentioned in Chapter 4. For example, capability represents internal factors and complexity represents external factors that influence a person's ability to make informed and thoughtful career choices (Sampson et al., 2000; 2004; 2020). Individuals who possess marginalized identities may feel internally prepared to make a career-related decision, but experiences with individual and institutional discrimination may limit their feelings around choice and options. Additionally, these experiences with individual and institutional discrimination may hinder their personal capabilities where these individuals find themselves in a double bind where both discrimination at the individual and at the institutional levels coalesce to negatively influence their career development (Tang, 2019). Where it may seem less dauting to overcome discrimination at one level, it may seem even more challenging to overcome discrimination at both levels.

The Case of Maria

Maria is a 23-year-old heterosexual cis-gender female struggling with making a decision on her major after changing her major twice. Maria is a first-generation college student who immigrated to the United States from El Salvador with her parents when she was 10-years old. Her father owns his own restaurant, and her mother is a homemaker. Her parents work hard and maintain a middle-class income for their family. She is the oldest of four children. Maria is unsure of her career interests and feels pressure from her family to work in her father's restaurant once she graduates. It has always been communicated to her that she needs to one day step up and take over the running of the family business. Using CIP as a theoretical framework, a practitioner might begin by administering the *Career Thoughts Inventory* (CTI; Sampson, et al., 1996) to assess the client's overall readiness to engage in career decision-making, and help the client identify and assess career thoughts negatively impacting their decision-making process. The practitioner scores the CTI and determines the client has high decision-making confusion and high external conflict that contribute to her low readiness for engaging in career decision-making. As a result, they decide to collaboratively create an Individual Learning Plan (ILP) outlining Maria's goals for seeking career assistance. As noted in earlier chapters, the ILP allows the client and practitioner to write down interventions utilized including the rationale for each intervention with prioritized activities to accomplish the client's goals and estimated time frames, so the client leaves with a clearly written action plan. After the practitioner administers and interprets the CTI, the client may go home with their ILP, the *CTI Workbook*, and a homework assignment to begin identifying and reframing the negative career thoughts preventing them from making a career decision. They may also identify a university website to explore majors and occupational information and add the website to the ILP as an intervention to explore further.

After a few weeks, the client returns because it is time to choose classes, and they are feeling uncertain about their major choice. The practitioner may utilize the Decision Space Worksheet (DSW) as a readiness assessment to get Maria's perspective on key factors affecting her career decision-making. To learn more about the self-knowledge domain, Maria can be encouraged to explore her identities as a woman from a middle class and immigrant family and the role these play in her career-related decisions. In the options knowledge domain, exploring how her identities potentially limit her career options is also vital. For example, given that she is a first-generation college student and first-generation immigrant to the US, the role models from different career fields to which she has been exposed may be limited. As noted above, there are expectations from her family that she will continue the family business. How does this pressure influence perceptions of career choice options, if at all? Experiences she has had with discrimination related to her identity as a El Salvadorian immigrant may also limit her perceived options and are important to explore. In the decision-making skills domain, examining each CASVE cycle phase is important. In the Communication phase, Maria may become aware of and explore her emotions that result from institutional and cultural bias, racism, and oppression in education and work. In the Analysis phase, Maria may internalize the discrimination she experienced and thus externalize her career problem with thoughts such as: "I don't know what to do, but because of the ways in which I have been treated, how much power do I really have to make a choice?" It is important to consider Maria's identity as a woman and an immigrant and explore how her experiences inform both self and options knowledge. Engaging in career conversations may deepen Maria's comprehension of how these may bear on, create challenges for, or provide support for her career decision-making. In Synthesis, Maria may be drawn to the

professions she has been exposed to by her parents and through television and social media or other sources. In the Valuing process, an important consideration may be balancing her beliefs and the influence of her family and cultural group in making a career choice. Finally, in the Execution phase, Maria may struggle with confronting and overcoming resistances and constraints of discrimination in making a career decision. Following exploration of the CASVE cycle, a practitioner can discuss with Maria the executive-processing domain. Here it is important to examine how any discrimination experiences may have been internalized and contribute to Maria's current "stuck" position or contributed to negative thinking about her ability to make career decisions. Interventions that connect Maria to role models with similar cultural backgrounds in different fields may be very helpful. In the absence of such role models, suggesting Maria read the biographies of successful individuals culturally similar may also aid her with career decision-making. After meeting with a practitioner, Maria leaves with a detailed Individual Learning Plan with various activities that will enable her to continue exploring her options and learn more about herself including her values, interests, and skills. The plan also reminds her to continue monitoring her negative career thoughts and remain aware of how these thoughts impact her career decision-making. At the end of the plan, she is encouraged to come back and visit with a career practitioner whenever she has additional questions.

Chapter 6 Summary

This chapter explored the importance of considering diversity when conceptualizing clients using CIP theory. We provided a definition for diversity, conceptualized diversity issues related to CIP theory's pyramid domains and the CASVE Cycle, considered readiness for career problem solving and decision-making, and ended with a case study demonstrating key concepts in this chapter.

Getting the Most Benefit from Reading Chapter 6

To effectively learn the material in this chapter, complete one or more of the following activities:

- Consider how your background and experiences have shaped the way you view yourself, your options, how you make decisions, and how you think about your career decision-making and problem-solving. Take note of how these have played a positive/supportive role, or a negative/non-supportive role. Which of these do you want to keep in mind, incorporate into your decision-making, or believe you may need to monitor during the process?

- Create a work genogram in which you diagram family and friends in relationship to you, along with their job titles. What observations can be made about who does/does not work in certain occupations? What patterns or trends might be demonstrated in the diagram?

- Thinking back on your career decisions, as well as your current career decision-making, how much volition have you had in making that choice? What factors influenced the amount of freedom you had? What compromises did you make, and what do those reveal about your work-related values, cultural/societal expectations, and your decision-making?

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CHAPTER 7
PROVIDING CAREER INTERVENTIONS
USING DIFFERENTIATED SERVICE DELIVERY

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This chapter introduces CIP theory-based models, tools, and critical ingredients for career interventions designed to help persons make informed and careful occupational, educational,

training, employment, and leisure choices. An understanding of the pyramid of information processing domains (Chapters 2 and 3), the CASVE cycle (Chapters 2 and 3), readiness for career decision-making and readiness for career intervention (Chapter 4), RIASEC theory (Chapter 5), and diversity (Chapter 6) are essential in designing CIP-based career interventions. After reviewing this chapter, the reader should have a foundation for understanding how CIP theory-based career interventions are designed to maximize efficiency and effectiveness of career resources and services. The chapter begins with a rationale for providing a level of practitioner support that meets individual needs and continues with an examination of differentiated service delivery in career intervention, service-delivery tools in career intervention, counseling strategies for career intervention, face-to-face and distance delivery of career interventions, critical ingredients of career interventions, potential ethical dilemmas in career interventions, the validity of CIP theory-based career interventions, the role of best practices and evidence-based practice in designing interventions, and examples of applying CIP theory in practice. The chapter ends with a summary and recommendations for getting the most benefit from reading the chapter.

Providing a Level of Practitioner Support that Meets Individual Needs[19]

Two persons may enter a counseling or career center with similar gaps (such as indecision about selecting a program of study) and yet receive very different career interventions. As discussed in Chapter 4, clients vary in their readiness for career choice (Sampson et al., 2000; Sampson et al., 2004; Sampson, 2008; Sampson et al., 2020; Sampson et al., 2023). Clients with low readiness often need the context of a helping relationship to make effective use of career resources. Some clients with low readiness will need encouragement because they lack confidence in their ability to select, locate, and effectively use career resources (for a more complete discussion of the topic of readiness, see Chapter 4). Some clients may have had prior negative learning experiences or had prior difficulty in using a resource center or the Internet and therefore need assistance to effectively use a career resources center or career services website. Some clients may be overwhelmed by the sheer amount of information available or by the complexity of their career problem and will need the service delivery process broken down into small, success-oriented experiences (as in the case of Andrew in Chapter 12). Other clients may have limited literacy, limited computer skills, be neurodivergent, or have a physical disability that necessitates higher levels of practitioner support (Sampson et al., 2020). Diversity issues (See Chapters 6 and 11) can further complicate the career choices individuals make. Given the above circumstances, the key question is how to best design and deliver career interventions to meet persons' widely varying needs? Our answer to this question is the differentiated service delivery model presented in the following section.

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[19] Content in this section was used or adapted from Sampson et al., (2004). Used or adapted with permission.

Differentiated Service Delivery in Career Intervention[20]

CIP theory's differentiated service delivery model aims to maximize the cost-effectiveness of career interventions by optimizing the level of practitioner support in relation to individual needs, thus allowing a larger number of individuals to be served by the practitioners available. This cost-effective approach is accomplished by relating the level of readiness for career decision-making to a level of practitioner support needed. Our intention is to devise a service-delivery schema that is detailed enough to adequately reflect the diversity of client needs, yet easy enough for busy practitioners to use in actual practice (Osborn, et al., 2023; Sampson et al., 2004; Sampson, 2008).

Career interventions are defined as, "any activity (treatment or effort) designed to enhance a person's career development or to enable that person to make more effective career decisions" (Spokane, 1991, p. 22), and involve the delivery of career resources and services designed to help individuals make informed and careful career choices (Sampson, 2008). Gelso and Williams (2022) noted that career interventions encompass interventions "ranging from highly structured classroom activities, to computer-assisted interventions to job clubs to individualized relationships that are indistinguishable from personal counseling" (p. 376). Career interventions are generally viewed positively. A 2021 Harris survey concerning career development (Harris Insights & Analytics, 2021) (https://ncda.org/aws/NCDA/pt/sp/statements_harris_2021) found that 85% of recent graduates and working adults in the United States perceived professional assistance in making career choices to be valuable.

This section on differentiated service delivery and career interventions begins with the seven-step service delivery sequence and continues with assessing readiness for career choice to differentiate career interventions, screening and diagnostic assessment, self-help services, brief staff-assisted services, individual case-managed services, practitioner interventions to promote effective use of assessments and information, complementary models for differentiated service delivery, social justice issues, and relating readiness assessment to decision-status taxonomies.

Seven-Step Service-Delivery Sequence[21]

The initial conceptualization of differentiated services was the seven-step service-delivery sequence (Peterson et al, 1991). This seven-step sequence was used to guide persons through the process of career choice, as well as organizing the career interventions they receive. The steps and processes involved in the seven-step service delivery sequence are described in Table 7.1.

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Table 7.1

The Seven-Step Service Delivery Sequence

Step	Process
1. Initial interview	A person is briefly interviewed to clarify the nature of their career problem. The initial interview includes a brief screening process to estimate the amount of assistance the person will need.
2. Preliminary assessment	The practitioner and the person discuss the results of a more thorough diagnostic assessment to provide information about their career problem and readiness for career choice. Preliminary assessment includes a comprehensive screening process to better determine the amount and type of assistance needed.
3. Define problem and analyze causes	The practitioner and the person come to a preliminary understanding of the problem, defined in terms of a gap between where they are and where they want to be. Hypotheses regarding the causes of the gap are discussed.
4. Formulate goals	The practitioner and the person collaborate in developing a set of goals to remove the gap.
5. Develop an individual learning plan	The practitioner assists the person in developing an individual learning plan (ILP) that will identify the resources and services necessary for attaining the goals indicated on the ILP. Career resources can include assessments or information while career services can include workshops or long-term group counseling.
6. Complete the individual learning plan	The person completes the ILP with the practitioner (or practitioners) providing encouragement, clarification, modeling, and reinforcement. The ILP may be amended as new needs are identified.
7. Summarize review and generalization	When the ILP is completed, the person discusses their progress toward reaching the goals established in Step 4. Plans for the continued use of career services are established. Application of CIP theory's career problem-solving approach to solving future problems is discussed.

Individuals referred for self-help services complete only step 1, whereas clients receiving brief staff-assisted services and individual case-managed services complete all seven steps in the sequence. In group counseling, prescreening of members occurs in steps 1 and 2, and input from group members is included in steps 3 through 7. Although the same seven steps are used for both brief staff-assisted and individual case-managed services, the time spent, and the activities used, vary for each type of service delivery. Specifically, the process is slower in individual case-managed services because persons with low readiness for decision-making need more help in using career resources and are more easily overwhelmed with information. Liptak (2001) created a similar service delivery sequence that included the following phases: (1) intake assessment, (2) case conceptualization, (3) goal development, (4) constructing objectives, (5) interventions, and (6) evaluation and termination. Gati and Asher (2001) proposed the PIC model that included the steps of prescreening, in-depth exploration, and choice. Gati (2013) noted that the PIC model is an adaptation of P-E fit approaches and is designed to better assist "individuals facing the challenge of making career decisions" (p. 188). The following sections examine the current approach in CIP theory for differentiating service delivery.

Assessing Readiness for Career Choice to Differentiate Career Interventions[22]

Over time, differentiated service delivery in CIP theory expanded beyond the seven-step service delivery sequence to integrate levels of readiness for career decision-making with different levels and types of career intervention (Sampson et al., 2000; 2004; Sampson, 2008; Sampson et al., 2020). The cost-effectiveness of career service delivery depends on the level of staff support meeting, but not exceeding, the needs of the individual. Therefore, individuals initially judged to have *high* readiness for career choice generally will be most cost-effectively served by self-help services. Individuals initially judged to have *moderate* readiness for career choice have the potential to be most cost-effectively served by brief staff-assisted services, and individuals with *low* readiness are potentially best served by individual case-managed services. For example, practitioners would rarely sit one-on-one with high-readiness individuals while they use career resources such as an interest inventory, occupational information, or instruction on the job search process. However, practitioners may occasionally need to sit one-on-one with a low-readiness client to help them monitor negative self-talk that may be limiting the individual's ability to effectively use a career resource. Figure 7.1 shows the relationship between CIP readiness constructs (capability and complexity) and levels of career service delivery (self-help, brief staff-assisted, and individual case-managed).

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[22] Content in this section was used or adapted from Sampson et al., (2004; 2020) and Sampson (2008). Used or adapted with permission.

Figure 7.1

A Two-Dimensional Model of Decision-Making Readiness for Selecting Initial Career Interventions
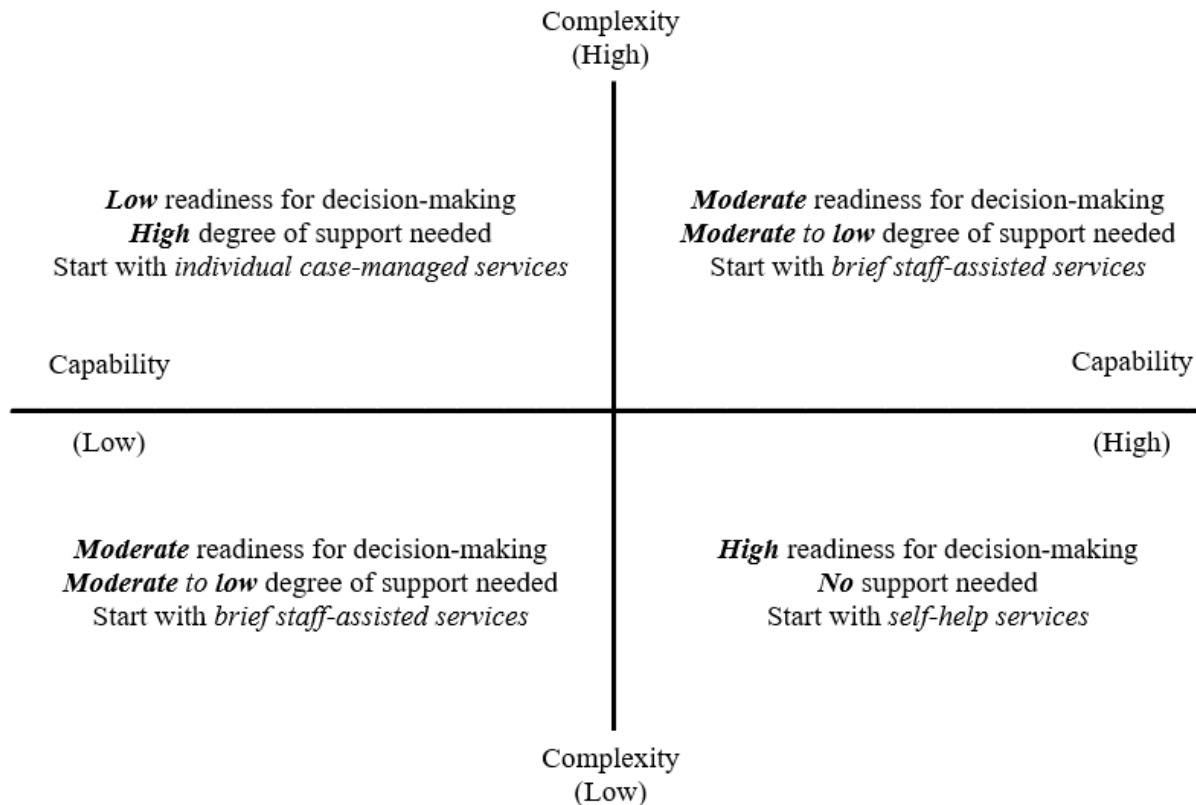
Note. Adapted from "Using readiness assessment to improve career services: A cognitive information processing approach," by J. P. Sampson, G. W. Peterson, R. C. Reardon, and J. G. Lenz, 2000, *The Career Development Quarterly*, *49*(2), p. 161. https://doi.org/10.1002/j.2161-0045.2000.tb00556.x. Copyright 2000 by the National Career Development Association. Adapted with permission.

The model depicted in Figure 7.1 is conceptual in nature and the next challenge for practitioners is how to put this conceptual model into actual practice. Figure 7.2 shows how practitioners can follow a sequence of steps to screen for career choice readiness and select preliminary service delivery options based on that level of readiness. Several assumptions provide a foundation for the model depicted in Figure 7.2.

- First, a counseling or career center in an educational, agency, or organizational setting is being used to deliver resources and services to individuals seeking assistance with occupational, educational, training, and employment decision-making. "Career resources include assessments, information sources, and instructional media... Career services include varying interventions from practitioners designed to provide individuals with the *type* of assistance (e.g., counseling, career course, or workshop) and the *amount* of

assistance (e.g., brief staff-assisted or individual case-managed services) they need to make career, educational, training, and employment decisions" (Sampson, 1999, p. 245).

- Second, the model assumes that individuals have the option to seek career resources on a self-help basis via the Internet or other self-help resources without necessarily being physically present in a counseling or career center.

- Third, if either clients or practitioners identify a lack of progress in the successful use of self-help resources, comprehensive screening may be subsequently used to better match client needs with service delivery options.

- Fourth, clients and practitioners may collaboratively decide to move from one level of assistance to another level to meet clients' needs more appropriately. For example, clients initially receiving individual case-managed services may improve in career decision-making readiness to the point where they move to brief staff-assisted services; or a client initially receiving brief staff-assisted services may be more cost-effectively served with a self-help or an individualized intervention as their level of readiness changes or is more accurately assessed.

Figure 7.2

Service Delivery Sequence for Drop-In Career Services
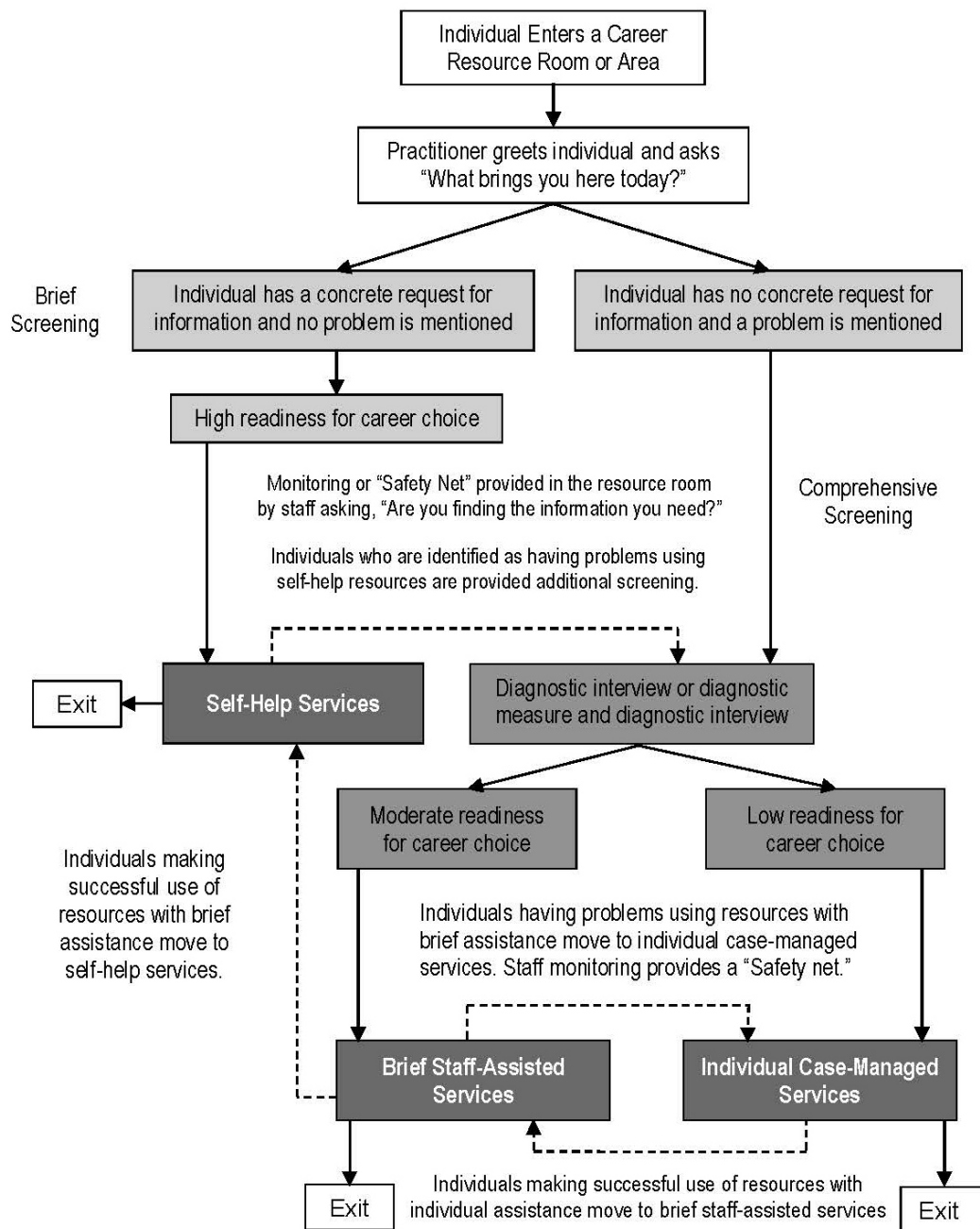
Note. Adapted from "Using readiness assessment to improve career services: A cognitive information processing approach," by J. P. Sampson, G. W. Peterson, R. C. Reardon, and J. G. Lenz, 2000, *The Career Development Quarterly*, *49*(2), p. 162. https://doi.org/10.1002/j.2161-0045.2000.tb00556.x. Copyright 2000 by the National Career Development Association. Adapted with permission.

Screening and Diagnostic Assessment of Readiness for Career Choice[23]

       The accurate assessment of readiness for career choice is essential to the effectiveness of differentiated services in CIP theory. In other words, diagnostic assessment of decision-making readiness is the foundation for successful career interventions. In the differentiated model shown in Figure 7.2, diagnostic assessment occurs in brief and comprehensive screening which are described in the following sections.

Brief Screening

       The first step in this model includes a *brief* screening upon entry to a counseling or career center where clients are greeted by a practitioner and asked their reason for seeking resources or services. Asking, "What brings you here today?" is a good, neutral starting point. If the practitioner judges the subsequent response to be a concrete request for information with no indication of a problem, then self-help access to career resources is provided without further screening. Reception staff with good verbal ability and effective communication skills can perform this brief screening function with on-the-job training.

Comprehensive Screening

       A second screening that is more *comprehensive* occurs if the request for information is vague, if a career problem involves general uncertainty about a decision that needs to be made, or if disabling emotions, confusion, or a complex array of circumstances are present. Comprehensive screening is based on a diagnostic assessment of the client and includes diagnostic measures and diagnostic interviews that are designed to clarify the needs of an individual so that an appropriate starting point can be determined for delivering career services. Successful comprehensive screening is dependent on the effective use of diagnostic assessment. Diagnostic assessment always involves the use of an interview and sometimes also includes a diagnostic measure. These two types of assessments are described in the following sections.

       Diagnostic Measures. *Diagnostic measures* include tests, inventories, and questionnaires that are designed to help clarify the nature of an individual's career problem as well as provide an estimate of readiness for career decision-making. The use of a diagnostic measure is a collaborative process between a practitioner and an individual to determine the level of service (self-help, brief staff-assisted, or individual case-managed) that the individual needs. A diagnostic assessment can help estimate the readiness of an individual for career decision-making. Using a diagnostic measure to assess readiness for career decision-making provides individuals and practitioners with a common frame of reference for discussing needs. Diagnostic assessment requires that a practitioner has demonstrated knowledge of career development, assessment, and career service delivery along with experience in the use of diagnostic measures. Due to the staff training required in making effective use of a diagnostic measure, generally no more than one or two such measures should be used in a career center, school, or agency setting.

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[23] Content in this section was used or adapted from Sampson et al., (2004; 2020) and Sampson (2008). Used or adapted with permission.

Practitioners should use a combination of scores, discussion of individual items from a measure, and discussion of an individual's situation before arriving at an initial understanding of an individual's readiness for career decision-making. Diagnostic assessment measures are best used to begin a discussion about readiness, as opposed to reaching a quick judgment about readiness. Simply administering a diagnostic assessment measure to a client, calculating a score, and placing them in a diagnostic category, such as low readiness, without discussing readiness with the individual can lead to an inaccurate diagnosis and is clearly inappropriate. In addition, the labels, "high readiness," moderate readiness," and "low readiness" should not be used when discussing readiness with an individual. More appropriate approaches could include the following:

> "Given what you have said, I think we can get started right now. Let's move to the table over there. Would that be OK?" (An individual with moderate readiness for decision-making is referred to brief staff-assisted services).

> "Given what you have said, I think you can get started right now. Would that be OK? Let me introduce you to [practitioner's name] who can see you now." (An individual with moderate readiness for decision-making is referred to brief staff-assisted services).

> "Given what you have said and your assessment results, I think it might be good to schedule an appointment with one of our staff members, so you have time set aside to think through your options. Would that be OK?" (An individual with low readiness for decision-making is referred to individual case-managed services).

A variety of diagnostic measures described in Chapter 8 are available to assess readiness for career decision-making. Differences exist in the specific decision-making readiness construct used to develop these measures. Practitioners should begin by selecting a readiness construct that fits their understanding of the career development process. Numerous constructs explain why some individuals appear to have difficulty in making career choices. Examples of these constructs include: negative career thinking (Sampson et al.,1998), career decision state (Leierer et al., 2016; Leierer et al. 2022), vocational maturity (Super, 1974), career maturity (Raskin, 1998), career adaptability (Super, 1983; Savickas, 1994; Savickas, 2020), career adapt-abilities (Savickas & Porfeli, 2012), vocational identity (Holland, 1997), decision-making self-efficacy (Taylor & Betz, 1983), career beliefs (Krumboltz, 1983), career decision-making difficulties (Gati et al., 1996; Gati, 2013), career barriers (Swanson et al., 1996), career indecision (Osipow, 1999), and career decidedness (Jones, 1989). These constructs can be used to provide a conceptual and operational basis for readiness assessment. For example, individuals who exhibit higher levels of vocational identity are more ready to benefit from career interventions, whereas individuals who exhibit higher levels of negative career thinking are less ready to benefit from a career intervention without practitioner support. Practitioners should only use diagnostic assessment measures that have evidence of being reliable, valid, well standardized, and relatively free of bias. [See Chapter 8 for a comprehensive description of diagnostic measures related to these constructs. Refer to https://diginole.lib.fsu.edu/islandora/object/fsu%3A209960 for additional information on measures of decision-making readiness].

One example of a diagnostic measure used in comprehensive screening is the Career Thoughts Inventory (CTI; Sampson et al., 1996a). The CTI is a 48-item readiness assessment measure used in applying the differentiated service delivery model. Based on CIP theory, the

CTI is a self-administered, objectively scored measure of dysfunctional thinking in career problem solving and decision-making. In addition to a *total score*, the CTI has three scales that include *decision-making confusion* (the inability to initiate or sustain the process of decision-making as a result of a lack of understanding about the decision-making process or disabling emotions), *commitment anxiety* (the inability to make a commitment to a specific career decision, along with generalized anxiety about the outcome of decision-making), and *external conflict* (the inability to balance the importance of one's own opinions with the importance of input from significant others, leading to a reluctance to assume responsibility for decision-making). The *Career Thoughts Inventory Workbook* (Sampson et al., 1996b), which is based on CIP theory, assists individuals to *identify*, *challenge*, and *alter* specific negative career thoughts and then follow up with *action* (using career resources and services to promote career exploration and career choice). It should be noted that the differentiated service delivery model described in this chapter does not require use of the Career Thoughts Inventory. Further information on the Career Thoughts Inventory is presented in Chapter 8 of this book. Other readiness assessment measures are described in Sampson, et al., (2013) and can be used with the differentiated service delivery model presented in this Chapter.

Another example of a diagnostic measure that can be used in comprehensive screening is the *CASVE Cycle Questionnaire* (CASVE-CQ; Werner et al., 2021), a newly developed diagnostic and outcome measure to assess one's progress and activity in the CASVE-based career decision-making process. The CASVE-CQ is a six-subscale, 42-item measure. Each item reflects a CASVE-consistent activity or thought in which the test-taker may or may not have engaged. The six subscales are consistent with the CIP-based practical application of the CASVE cycle for career decision-making as clients are encouraged to progress through each of the five phases of the cycle as represented through the C-A-S-V-E but then return to C or the Communication phase a second time to evaluate the executed decision for a total of six phases or subscales. Test-takers can answer yes or no to each item to indicate if they have engaged in that activity or thought. Completion of at least half of the activities in each subscale indicates adequate completion of that decision-making phase and a likely indication the test-taker is prepared to engage the next CASVE phase. Practitioners can also assess if the test-taker has engaged decision-making activities in an "ideal" fashion by determining if the completed CASVE-CQ subscales is consistent with the order of the CASVE-cycle phases. Ideal navigation of the CASVE cycle involves completion of the CASVE cycle phases in the CASVE order rather than skipping a phase and engaging activities in a subsequent phase. More detail on the development, scoring, and use of the CASVE-CQ is provided in Chapter 8.

Diagnostic Interviews. *Diagnostic interviews* provide an opportunity to explore factors (such as capability and complexity) that contribute to an individual's readiness for decision-making. Interview questions are an important component of comprehensive screening. Examples of diagnostic interview questions or prompts are as follows:

"What thoughts do you have about the type of education you're looking for?

"What schools/colleges/universities are you considering right now?

"Any thoughts about job training that you are interested in?

"What training programs have you considered?

"Talk to me about any specific ideas you have about your next steps in making a decision?"

"What type of information do you need to make a choice?

"Tell me about any barriers you perceive that might make your career choices more difficult?

"What next steps can you take to start in finding a job?

A variety of other questions could be asked depending on the individual's needs.

Diagnostic interview questions related to complexity include the following:

Family factors: Have your family members or other important people in your life influenced your career choices? How?

Social factors: Have you ever experienced discrimination in making career choices? How has this influenced your career choices?

Economic factors: Have your personal finances influenced your career choices? How?

Organizational factors: Have your current or former employers influenced your career choices? How? Has being self-employed influenced your career choices?

The Decision Space Worksheet (DSW; Peterson et al., 2010; Peterson et al., 2016) can also be used to identify complexity factors. The DSW is described in more detail in Chapter 8 of this book.

After considering assessment and interview results, the practitioner then makes a recommendation to the client for an appropriate level of service (self-help, brief staff-assisted, or individual case-managed services) based on the collaborative judgment of the practitioner and the client using the models shown in Figures 7.1 and 7.2. As stated previously, practitioners should use a combination of test and interview data in discussing decision-making readiness with clients. The comprehensive screening function requires a practitioner who has demonstrated knowledge of career development, assessment, and career service delivery along with supervised experience in the use of readiness assessment measures.

Potential modifications to career interventions shown in the feedback loops in Figure 7.2 are based on response to intervention (Fuchs et al., 2003) as it becomes clear that clients are having difficulties in learning or difficulties in completing agreed-upon tasks and need more, or a different type of, assistance (Sampson et al., 2020; Sampson et al., 2023). Spokane and Nguyen (2016) recommended using a response to intervention (RTI) model in career interventions in a manner similar to educational and school psychology. RTI involves the following intervention sequence: (1) provide interventions shown to be generally effective, (2) monitor progress, (3) provide something more or something else for individuals having difficulty, and (4) continue monitoring and make intervention changes as needed (adapted from Fuchs et al., 2003).

If screening is not completed prior to receiving career services, clients with low readiness for decision-making may be underserved by staff who are unaware of their substantial need for help, and high-readiness clients may be overserved by staff who deliver costly individualized interventions when less expensive approaches would likely be as effective. In this model,

screening clients at the beginning of service delivery increases the likelihood that the services delivered are congruent with the needs of clients. As a result of better allocating scarce staff resources (Holland, 1998), staff will have time to serve more clients with briefer interventions and will have more time to deliver intensive, individualized interventions to assist clients with extensive needs (Sampson et al., 1999). The nature of self-help, brief staff-assisted, and individual case-managed services is described in the following sections.

Self-Help Services[24]

Self-help services involve self-guided use of self-assessment, information, and instructional resources in a library-like setting or Internet-based remote setting, where resources have been designed for independent use by individuals with a *high readiness* for career choice. In self-help services, practitioners provide little or no assistance to high-readiness individuals. However, self-help does not equate to practitioner inattention. Staff are available face-to-face or at a distance to respond to questions from individuals as needed. In library-like settings, practitioners can periodically check with the person to see if individuals are progressing, asking, "Are you finding the information you need? This question is part if the response to intervention element of a career intervention. It is important to emphasize that the provision of CIP theory-based self-help services does not occur in a completely counselor-free environment, as explained in more detail later.

Guiding and monitoring the selection, location, sequencing, and use of resources is the responsibility of the individual with practitioner support provided for the resources being used. Career resource guides that suggest assessment, information, and instructional options for common career concerns can be used to facilitate the intervention process. Appropriate signage and indexes aid in locating resources. Self-help resources are designed to help individuals understand when and how the resource should be used, including the circumstances when more assistance may be needed. Practitioners maintain aggregate data for program evaluation and accountability. Chapter 14 in this book includes two case studies, Catherine and Arnie, that illustrate the conceptual ideas presented in this section.

Successful use of career service interventions in a self-help mode depends on the following factors.

- Accurately assessing user needs during brief screening in a career services setting to ensure that there is a reasonable likelihood that the independent use of career resources will meet the individual's needs.

- Accurately linking individual needs to assessment, information, and instructional resources.

- Making available an effective "safety net" that provides reasonable opportunities for identifying individuals who are not making successful use of self-help career resources and then providing a higher level of service (e.g., brief periodic checking with individuals

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[24] Content in this section was used or adapted from Sampson et al., (2004; 2020) and Sampson (2008). Used or adapted with permission.

to ask, "Are you finding the information you need?"); an application of the response to intervention model.

- Having staff available (face-to-face, or at a distance) to respond to basic questions about career resource use (e.g., clarifying interpretation of self-assessment instruments and solving problems related to the use of a specific resource).

- Having available easy-to-understand support materials (e.g., resource guides) and signage to assist individuals in selecting, locating, sequencing, and using career resources and services that relate to the individual's needs.

- Having available text and multimedia career resources that are self-instructional and easy to use, including appropriate readability for the populations being served (Sampson, 1999; Sampson & Reardon, 1998).

History and Context

In reviewing the history of self-help or counselor-free career interventions, Reardon (2017) noted that controversy has surrounded these interventions from the earliest days of the vocational guidance movement in the early 1900s. Indeed, such interventions are not frequently reported in the current literature. Much of the controversy in the past stemmed from the degree to which an individual was seen as having the capability to engage career planning successfully in a self-directed way, and this was not universally agreed upon. For example, while Frank Parsons (1909) used responses to questionnaires and interviews to assess individual differences important for career planning, some who led the development of measurement in psychology viewed self-report measures as less reliable. (Savickas & Baker, 2005). This view was enhanced by the momentum for psychological testing that accelerated after WWI.

At the same time, Harry Dexter Kitson (1949), the leader of a movement in psychology called "self-analysis," challenged the approaches rooted in psychological testing. His idea was to find the most efficient way to help individuals find the information needed for career planning, and this led him to advocate self-assessment rather than the use of psychological tests. His approach relied on individuals' self-analysis of interests and abilities and included a sort of do-it-yourself technique of career counseling described in his extensive publications.

In this regard, it is important to note the distinction between self-help services as defined in CIP theory and a counselor-free intervention. For example, Whiston et al. (2003) defined a counselor-free intervention as occurring when a counselor is not involved in the intervention, and this might include a broad range of possible activities from having an individual use a stand-alone computer-assisted career guidance system or read occupational information. As stated earlier, CIP theory-based self-help services has practitioners available when needed, and as such cannot be considered a counselor-free intervention.

Since 1980, the focus in assessment has expanded from interests and abilities to the assessment of readiness to engage in the process of career decision-making and problem-solving itself, a cognitive process (Larson, et al., 2013; Sampson et al., 2013). Moreover, Holland's (1997) RIASEC theory introduced in the 1960s provided a new way to assess individual characteristics and the nature of occupational activities using an organizing theoretical schema that can be applied to both individuals and options. The development and use of the *Self-*

Directed Search (Holland & Messer, 2017) was an explicit contribution to self-help career interventions including self-assessment. As a result, the focus in the career development field moved to (a) the quality of an individual's thinking about career planning and (b) schema used to conceptualize personality and environmental congruence (Sampson et al., 2004).

Research

Reardon (2017) noted that the research on the effectiveness of counselor-free or self-help career interventions is not altogether encouraging. Many of these studies involved stand-alone use of computer-based career guidance systems available on the Internet such as the System for Interactive Guidance and Information (SIGI; http://www.valparint.com/sigi3.htm) or Choices Planner (now known as CHOICES360 https://www.xap.com/choices360/). Brown and Ryan Krane (2000) noted that while self-help interventions have been shown to be less effective, such interventions could be improved with appropriate practitioner intervention. In contrast to the findings of Whiston (2011) and others regarding counselor-free interventions, an earlier review by Craighead et al. (1984) concluded that results of self-help in career counseling were generally favorable. Kivlighan and Shapiro (1987) indicated that two studies by Fretz and Leong (1982) and Holland (1974) suggested that people who needed less help were the ones benefiting the most from self-help. Holland (1997) indicated that people with varied personalities might respond differently to various treatment interventions.

Evidence of the impact of a theory-based, counselor-free intervention was reported by Dozier et al. (2015). They used the SDS-R Internet Version (Reardon & Psychological Assessment Resources Staff, 2010) in an experimental study of college students ($N = 125$) who were randomly assigned to complete the SDS-R Internet version or to a control group that did not complete the SDS. Results indicated that individuals who completed the SDS-R Internet and reviewed the Interpretive Report engaged in a greater frequency of exploratory career behaviors over three weeks and were considering more occupational alternatives than members of the control group. The amount of time spent reviewing the SDS Interpretive Report by members of the treatment group was associated with greater frequency of career exploratory behavior and with the increased number of occupations being considered.

Another example of theory-based self-help career services was reported in a case study by Kronholz (2015). This career intervention used two artifacts from CIP and RIASEC theories, the CIP pyramid and the RIASEC hexagon figure. This study revealed the importance of readiness as a component of career services and illustrated the effective use of CIP and RIASEC theories. The career practitioner noted that the individual's adherence to and understanding of the RIASEC model was essential in facilitating self-help career advising and better career decision outcomes (Tracey, 2008). Reardon (2017) described an approach to enhancing self-help career services using CIP and RIASEC theories. The approach included a diagram of how an individual could be served in self-help if the practitioner used CIP and RIASEC theories to assess readiness for career decision-making. This was the approach used by Kronholz (2015) in the case study with Anna.

Brief Staff-Assisted Services[25]

Brief staff-assisted services involve practitioner-guided use of assessment, information, and instructional resources in a library-like, classroom, group, or virtual setting for clients with *moderate readiness* for career choice. Successful use of career service interventions in a brief staff-assisted depends on the following factors.

- Accurately assessing user needs during comprehensive screening to ensure that there is a reasonable likelihood that minimally supported use of career resources will meet the individual's needs.

- Having available an effective "safety net" that provides reasonable opportunities for identifying individuals who are not making successful use of career resources

- Having staff available in the career library or resource area (or virtually) to respond to basic questions about career resource use.

In brief staff-assisted services, staff provide minimal assistance to moderate-readiness individuals. Practitioners are responsible for collaboratively guiding and monitoring the selection, sequencing, location, and use of resources with the Individual Learning Plan documenting goals and resources selected with related outcomes. As with self-help services, practitioners maintain aggregate data for program evaluation and accountability. Examples of brief staff-assisted services include (a) drop-in services, (b) career courses with large group interaction, (c) short-term group counseling, and (d) workshops. Chapter 13 in this book includes two case studies, Kiara and Carla, that illustrate the conceptual ideas presented in this section.

Drop-In Services

Drop-in services involve practitioner-guided use of self-assessment, information, and instructional resources in either a career resource room or virtually via a career services website. Practitioners complete scheduled periods of service delivery in a career library or resource room with clients served on a first-come, first-served basis. Practitioners can also schedule time to be available for distance service delivery to clients. Some career services will host in person and virtual services simultaneously, while other career services will offer virtual services on certain days or during certain hours and then in person services for the remaining days and hours the center is open. While most of the examples in this section apply to in-person service delivery, most of the principles also apply to services provided at a distance via a website. The nature of distance service delivery is also described later in this chapter. Drop-in services provide an opportunity to expand the role of the practitioner from a traditional one-on-one scheduled interaction with one client in the practitioner's office to interaction with several clients simultaneously on a drop-in basis. Continuity in service delivery resides in common staff training and staff teamwork, as well as collaboratively developed, written individual learning plans, rather than the action of any single practitioner. As a result, the client is not restricted to the available appointment times of any one practitioner. Clients can proceed quickly or slowly, choosing to spend considerable time working with several practitioners or choosing to work with

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[25] Content in this section was used or adapted from Sampson et al., (2004; 2020) and Sampson (2008). Used or adapted with permission.

one practitioner during their assigned times in the career library if they value the relationship with one specific practitioner. Clients, with staff input, decide how much time they need to use resources and seek staff assistance. This approach can accommodate two clients who request to receive assistance together and allows staff to be responsive to periods of high and low client demand by "staffing up" or "staffing down" at peak- or low-demand times. This approach to service delivery can reduce the backups and delays in an appointment-based system at times of high demand for services. Clients generally react very positively to being seen immediately, or after a short wait, and not being required to schedule an appointment in order to meet with a practitioner. Occasionally during times of high demand for assistance, the client is given the option of waiting longer or returning at a later time when experience shows the center will be less busy.

A variation of drop-in services involves paired or collaborative counseling where a practitioner simultaneously interacts with two clients at once (McClain & Sampson, 2014; Sampson et al., 2011). This approach takes advantage of both a preexisting functional social relationship between the two clients and the potential benefits of collaborative learning. The two clients interact with each other while they talk with a practitioner and while they use career assessments, information, and instruction. The individuals need not to be related or have the same career problem. Sampson, et al. (2011) described characteristics of appropriate clients and practitioners, characteristics of collaborative learning, and ethical issues.

Success in drop-in services requires practitioners to be capable of quickly establishing helping relationships, clarifying client progress in completing the individual learning plan, and subsequently revising the individual learning plan if new needs become apparent in working with the client (response to intervention). Staff also need to be able to work with several clients at the one time, dividing their time between each client as appropriate. For example, a practitioner may help a client interpret the results of a career assessment, then help orient another client to a web-based career information resource, critique a resume for yet another client, and return to the first client to add exploratory tasks as a follow-up to reviewing the client's assessment results. Common staff training is required to reduce the chances of inconsistent or disjointed service delivery when multiple staff serve one individual (Sampson & Reardon, 1998; Sampson et al., 1999). The availability of practitioners in a library-like setting allows modeling of information-seeking behavior and the provision of timely encouragement and reinforcement of client exploratory behavior (Sampson & Reardon, 1998). Staff can assist clients in selecting, sequencing, locating, and using resources based on the creation and regular review of individual learning plans. Practitioner availability also provides users with opportunities for relatively immediate follow-up of resource use during the learning event. Reardon (1996) noted that drop-in services (originally termed "self-directed career decision-making") could be used to cost-effectively deliver career interventions at a cost lower than that of individual counseling.

Career Courses with Large-Group Interaction

Career courses with large-group interaction involve instructor-guided use of resources in a classroom setting with limited opportunity for personal interaction among students. Screening is typically accomplished by students self-selecting to register for the course or by having an adviser or instructor recommend the course. Student learning contracts can individualize career resources, or the same career resources can be assigned for all students in a predetermined order.

Faculty grading of student assignments (e.g., use of career assessment and information) provides the "safety net" to identify students who may have low readiness for occupational and employment decision-making and who therefore may need more individualized assistance.

Short-Term Group Counseling

Short-term group counseling involves practitioner-guided use of resources in a group setting with limited opportunity for sharing information or for developing group cohesion. Screening for career services can occur at the same time as screening for group membership. Members' use of career resources can be linked to specific needs via an individual learning plan for each group member. If practitioners follow a more structured group approach where all members use a common set of career resources, then practitioners can structure group sessions to process members' experience in using specific resources. Pyle and Hayden (2015) provided additional details on the content and process of group career counseling.

Workshops

Workshops involve practitioner-guided use of resources in a group setting with little or no opportunity for sharing information or for developing group cohesion among individuals. In this way, workshops are different from group counseling. If a workshop has a predetermined sequence of topics, resource use follows the topic sequencing. If workshop topics vary each time according to participant needs, resource use will also vary in this way.

Individual Case-Managed Services[26]

Individual case-managed services involve practitioner-guided use of assessment, information, and instructional resources in an individual office, classroom, or group setting for clients with *low readiness* for career choice. Successful use of career service interventions in an individual case-managed mode depends on the following factors.

- Accurately assessing user needs during comprehensive screening to ensure that there is a reasonable likelihood that the supported use of career resources will meet the individual's needs.

- Having staff available in the career library or resource room to respond to basic questions about career resource use (e.g., clarifying interpretation of self-assessment instruments and solving problems related to the use of a specific resource).

- Having practitioners available who are competent to integrate career and mental health counseling in dealing with individuals' low readiness for career choice. (See Chapter 10 for more information on the integration of career and mental health issues from a CIP theory-based perspective)

In individual case-managed services, staff provide substantial assistance to clients with low readiness for career choice. As with brief staff-assisted services, practitioners are responsible

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for collaboratively guiding and monitoring the selection, sequencing, location, and use of resources as documented on the individual learning plan. In comparison with other levels of service delivery, the individualized approach includes the maintenance of individual records to document and supervise services. Examples of individual case-managed services include (a) individual counseling, (b) career courses with small-group interaction, and (c) long-term group counseling. Chapter 12 in this book includes a case study on Andrew that illustrates the conceptual ideas presented in this section.

Individual Counseling

Individual counseling involves appointment-based, practitioner-guided use of resources in an individual office or remote setting. Unlike brief staff-assisted service delivery, in which the client may engage with different practitioners with brief exchanges on a drop-in basis, individual counseling assumes the client will have an ongoing relationship with the same practitioner over several sessions. Individual counseling offers maximum flexibility in relating counseling interventions to the needs of the individual. The time available allows the practitioner to provide more-detailed orientations and follow-up to resource use, as well as assistance in using resources (such as occupational information) or processing insights in the moment of the intervention, such as with card sort assessments. The nature of an individual's use of career resources provides practitioners with information about factors that may be contributing to low readiness for career decision-making. For example, an individual's comments about potential occupations resulting from the completion of an interest inventory may indicate specific negative self-talk that can be identified, challenged, and altered. The nature of the supportive relationship established between the practitioner and the client over time may be a key element in client willingness to risk the inevitable change associated with career decision-making.

Career Courses with Small-Group Interaction

Career courses with small-group interaction involve instructor-guided use of resources in a classroom setting with considerable opportunity for personal interaction among students and instructors (Reardon & Lenz, 2018). The previously described counseling interventions for a career course with large-group interaction apply here as well. The difference is that by meeting with small groups of students in addition to giving large-group lectures, instructors can gain more information about the nature of student decision-making difficulties and can provide more assistance to students in improving their readiness for occupational and employment choice (Reed et al., 2001). Dividing the class into small groups of students can improve the capability of students to learn from each other via modeling and reinforcement.

Long-Term Group Counseling

Long-term group counseling involves practitioner-guided use of resources in a group setting with considerable opportunity for sharing information and developing group cohesion among members (Corey, 2016). The previously described counseling interventions for short-term group counseling apply here as well. The difference is that the longer duration of the group allows the development of group cohesion necessary to challenge and change typically long-established problematic patterns of thinking, feeling, and behaving. The longer duration also provides potential support over a larger proportion of the decision-making process--for example,

supporting members in following through on an action plan to implement their goals. This type of group allows for more integration of career and mental health issues for low clients with low readiness for career choice.

In summary, self-help services, brief staff-assisted services, and individual case-managed services vary in terms of the user's readiness, the level of assistance provided, the person who guides resource use, the place where the services are provided, the selection, sequencing, and pacing of resources and services, and record keeping. Table 7.2 summarizes these variations among the three levels of service delivery.

Table 7.2

Variation in Career Interventions by Level of Service Delivery

	Self-Help Services	**Brief Staff-Assisted Services**	**Individual Case-Managed Services**
Readiness of the user	High	Moderate	Low
Assistance provided	Little or none	Minimal	Substantial
Who guides resource use	The user	A practitioner	A practitioner
Where services are provided	Library-like or remote settings	Library-like, classroom, group, or remote settings	Individual office, classroom, group, or remote settings
Selection and sequencing of resources and services	Resource guides	Individual Learning Plans	Individual Learning Plans
Record keeping	Aggregate data for program evaluation and accountability	Aggregate data for program evaluation and accountability	Individual records

The following section of this chapter describes more specific practitioner interventions for assessment and information resources that fit with diagnostic and response to intervention aspects of the differentiated services delivery model.

Practitioner Interventions to Promote Effective Use of Assessments and Information[27]

The differentiated service delivery model further evolved to include specific practitioner interventions to promote effective client use of assessments and information in brief staff-assisted and individual case-managed services. These practitioner interventions include the

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following four actions: 1) understanding, 2) recommending, 3) orienting, and 4) follow-up (Sampson, 2008):

1. *Understanding* involves clarifying the career assessment and information needs of a client. The understanding step includes:

   - Clarifying the client's readiness for decision-making (screening).

   - Clarifying what the client needs to *know* to make a career choice (the pyramid of information processing domains).

   - Clarifying what the client needs to *do* to make a career choice (the CASVE cycle).

2. *Recommending* involves the practitioner suggesting career assessments and information on the ILP that are appropriate for the client's needs. The recommending step includes collaborating in:

   - Determining the amount and nature of practitioner support the client will need to make effective use of career assessments and information.

   - *Selecting* and *sequencing* career assessments and information on the ILP that are likely to meet the needs of the client, while *pacing* the use of assessments and resources at a rate that is congruent with their readiness for career decision-making. Clients with low readiness for decision-making can easily be overwhelmed with many tasks of any type. Problems with being overwhelmed are also more likely for individuals with learning disabilities, limited cognitive ability, poor literacy, restricted language proficiency, and mental health difficulties. It is better to start slowly and then proceed more quickly as an individual's confidence builds than it is to start quickly and risk the individual being overwhelmed and anticipating failure in completing an ILP.

   - Participation in choices about career resources and services can increase clients' ownership in the learning process and improve the likelihood of successfully completing homework assignments. Appropriately involving clients in selecting among resource options sends an important message that they can make good decisions.

3. *Orienting* involves preparing clients to make effective use of career assessments and information. The orienting step includes:

   - Relating the use of career assessments and information indicated on the ILP to what the client needs to *know* to make a career choice (the pyramid of information processing domains).
   - Relating the use of career assessments and information indicated on the ILP to what the client needs to *do* to make a career choice (the CASVE cycle).
   - Promoting an understanding of the potential benefits, limitations, and functioning of career assessments and information in relation to their goals.
   - Promoting an understanding of how to make effective use of assessments and information.

- Modeling information-seeking behavior by showing the client how to locate and use assessments or information.

4. *Follow-up* involves checking that clients have appropriately used the career assessments and information on their ILP to achieve their goals and that they have a plan of action for the future (response to intervention). The follow-up step includes:

   - Reviewing the client's experience in using career assessments and information, as well as noting any problems that need resolving.

   - Reinforcing the client's information-seeking behavior.

   - Reviewing the client's progress toward meeting the goals indicated on their ILP. If the client's goals are still unmet, recommend the use of additional career resources and services, noting these additions on the ILP.

   - Helping the client understand how the learning resulting from using career assessments and information can be generalized to future career problem solving.

In self-help services, a practitioner has completed the *understanding* step collaboratively with the client and has determined that their readiness for decision-making is high and the use of self-help resources are appropriate. *Recommending* is accomplished by using resource guides (explained in more detail in the subsequent section on service-delivery tools). *Orienting* and *follow-up* can be contained within the resource itself. In brief staff-assisted services, the four steps are completed more quickly and less thoroughly, while in individual case-managed services, the four steps are completed more slowly and thoroughly. The following section examines complementary models for differentiated service delivery.

Complementary Models for Differentiated Service Delivery[28]

The 'RightServicing' approach developed by the IBM Cúram Research Institute (Duggan, 2013; Lee-Archer, 2012; O'Riordan & Duggan, 2014) provides an alternative differentiated service delivery model for organizations providing social, welfare, and workforce services within the public sector. The goal of 'RightServicing' is to deliver the 'right' level of public services to achieve a desired outcome where clients are neither over-served nor under-served (Toh & Sampson, 2021). This is very similar to the goal of CIP theory's differentiated service-delivery model, which is, "to provide the right *resource*, used by the right *person*, with the right level of *support*, at the lowest possible cost" thus avoiding overserving and underserving clients in relation to their needs (Sampson, 2008, p. 6). Another similarity between the two models is that each have three levels of service delivery, with CIP having self-help, brief staff-assisted, and individual case-managed services, and 'RightServicing' having self-managed, facilitated, and managed services.

Some university counseling centers and other community-based behavioral health providers have adopted differentiated service delivery models often referred to as stepped care in the literature (e.g., Bailey, et al., 2022; Haaga, 2000; Sobell & Sobell, 2000). These models have

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[28] Content in this section was used or adapted from Sampson et al., (2020). Used or adapted with permission.

been applauded for both relieving the heavy workload of counseling center staff and effectively meeting the needs of the students they serve (Cornish, et al., 2017). Similarities across these stepped care models, RightServicing, and CIP include: (a) placing client needs assessment early in the service delivery process; (b) allocating the duration of practitioner time spent with clients in relation to the extensiveness of client problems faced and barriers encountered, which is essential in providing the substantial time needed to address the complex needs of some clients; (c) moving between levels of service delivery as client needs change; (d) using information and communication technology (ICT) to optimize the capabilities of practitioners and technology in meeting demand for assistance; and (e) using paper-based and electronic service delivery tools to improve the accessibility of resources to clients (Toh & Sampson, 2019).

Social Justice Issues and Differentiated Service Delivery[29]

An important goal of the differentiated service delivery model is to promote social justice in terms of persons' access to career interventions (Lenz & Osborn, 2017; Osborn, et al., 2023; Sampson, et al., 2020). The supply of career services is insufficient in meeting current demand, and this is unlikely to improve anytime soon. The differentiated model serves 60 to 63 percent more clients than traditional appointment-based individual career counseling modalities (Sampson et al., 2017). Relying on appointment-based individual counseling models to deliver career interventions may create unintentional social injustice because of the limited number of people that can be served, especially among traditionally marginalized populations (Sampson et al., 2011).

Relating Decision-making Readiness Assessment to Decision-Status Taxonomies[30]

A variety of decision-status taxonomies have been created to assist practitioners in more readily understanding clients' needs and selecting appropriate interventions. Taxonomies typically integrate varying amounts of theory, research, and practice in describing potential client needs. There have been previous considerations of taxonomies in relation to career decidedness indicating the importance of differentiating degrees of readiness (Gordon, 1998). Some taxonomies also include a specific measure of the taxonomy elements (e.g., Gati et al., 1996; Gati & Saka, 2001). There is substantial evidence of the impact of the different phases of readiness on aspects of career decision-making and mental health, emphasizing the importance of categorizing readiness for decision making (Di Fabio et al., 2013; Fouad et al., 2006; Gadassi, Gati, & Dayan, 2012; Gadassi et al., 2013; Gati et al., 2013) There are also indications of cross-cultural applications of a phased conceptualization of decidedness (Willner et al., 2015). CIP theory's decision-status taxonomy in career problem solving and decision-making (Peterson et al., 1991; Peterson et al., 1996; Sampson et al., 2004) comprises three major categories that include *decided*, *undecided*, and *indecisive*.

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[29] Content in this section was used or adapted from Sampson et al., (2020). Used or adapted with permission.

[30] Content in this section was used or adapted from Sampson et al., (2004). Used or adapted with permission.

Decided Individuals

Decided individuals have made a private or public commitment to a specific occupational choice. Three subcategories of decided individuals exist in this taxonomy. First, individuals who can specify a choice but wish to confirm or clarify the appropriateness of their choice by contrasting it with other possible choices are categorized as decided confirmation. For example, some individuals tend to be careful and systematic in their approach to making any important decision. These individuals wish to ensure that they have completed the Valuing phase of the CASVE cycle to the best of their ability. Second, individuals who can specify a choice but who need help in implementing their choice are categorized as decided implementation. For example, individuals may need assistance in getting a job or selecting training options related to an occupation chosen in the Valuing phase of the CASVE cycle. These individuals either realize they need assistance before they begin the Execution phase of the CASVE cycle, or they have attempted execution previously and had difficulty. Third, individuals who have made a public commitment to a specific choice as a strategy for avoiding conflict with significant others but who are actually undecided or indecisive are categorized as decided-conflict avoidance. Janis and Mann (1977) referred to "unconflicted change" where a decision maker chooses the most immediately available option to reduce stress. In reality, these persons often have the characteristics of undecided or indecisive individuals, described in the following sections.

Undecided Individuals

Undecided individuals have not made a commitment to a specific occupational choice due to gaps in the knowledge necessary for choosing. This taxonomy includes three subcategories of undecided individuals. First, individuals who are unable to specify a choice but have no need to make a choice at the present time are categorized as undecided-deferred choice, which at times may be an appropriate career choice strategy (Holland & Holland, 1977; Krumboltz, 1992). For example, a college freshman taking general education courses and participating in various campus activities to obtain knowledge and life experience prior to committing to a college major at the end of the sophomore year can appropriately defer a choice until a later date. These types of undecided individuals typically do not seek career services because they lack external and internal cues in the Communication phase of the CASVE cycle that a gap needing resolution exists. Second, individuals who need to choose, are unable to commit to a choice, and who lack self-, occupational, and/or decision-making knowledge are categorized as undecided-developmental (Chartrand et al., 1994). These individuals should not be considered dysfunctional; rather, they have not gained the knowledge or experience necessary to make a choice. In terms of the pyramid, these individuals need clarification or addition of self, occupational, and/or decision-making knowledge and tend to have metacognitions that are less negative with respect to what is necessary to enable them to make a choice (in comparison with indecisive individuals). Third, individuals who have the characteristics of someone who is undecided, with the addition of having an overabundance of talents, interests, and opportunities are categorized as undecided-multipotential (Fredrickson, 1972; Pask-McCartney & Salomone, 1988). These individuals are often overwhelmed with the diversity of available options and may experience pressure from significant others, including family members, for high levels of achievement.

Indecisive Individuals

Persons who have not made a commitment to a specific occupational choice due to gaps in the knowledge necessary for choosing and who have a maladaptive approach to problem solving in general that is accompanied by a dysfunctional level of anxiety are categorized as indecisive (Chartrand et al., 1994; Crites, 1969; Fuqua & Hartman, 1983; Gelso & Williams, 2022; Holland & Holland, 1977; Lucas, 1993; Lucas & Epperson, 1990; Salomone, 1982; Savickas, 1989). Indecisive individuals are like undecided individuals in terms of knowledge gaps but differ in terms of executive processing. Executive processing deficiencies present in indecisive individuals may include excessive negative self-talk, attentional deficits, or confused thought processes. These deficiencies limit the acquisition of decision-making skills and occupational knowledge, as well as the clarity and consistency of self-knowledge. Subsequent awareness of these limitations only serves to reinforce perceived inadequacy in decision-making. Table 7.3 summarizes the three levels of the decision-status taxonomy.

Table 7.3

Career Decision-Status Taxonomy

Decided Individuals
- Confirmation   - Implementation   - Conflict Avoidance
Undecided Individuals
- Deferred Choice   - Developmental   - Multipotential
Indecisive Individuals

Determining Decision-Making Status in the Taxonomy

The first step in determining the decision-making status of clients is relatively straightforward. If the client can specify an occupational, educational, training, or employment choice in brief screening, they are tentatively considered decided, whereas the inability of the client to specify a choice leads to a tentative categorization of undecided. Asking clients about their current status or using a brief readiness screening tool, such as the Career State Inventory (CSI; Leierer et al., 2022) provides a quick and effective method of tentatively differentiating decided versus undecided clients. If the client is tentatively judged by the practitioner as undecided, the next task is to determine if the client is actually undecided or indecisive. The undecided-indecisive judgment is more difficult to make than the decided-undecided judgment. Using a brief readiness assessment instrument during comprehensive screening, described previously in this chapter, is a key resource for distinguishing the undecided-indecisive decision state. For example, a high score on the CTI (Sampson et al., 1996a) may (or may not) indicate indecisiveness. After discussing selected item responses with the client, the counselor can make

a tentative judgment that the client is undecided or indecisive. This judgment is reevaluated on an ongoing basis as counseling proceeds. Listening for negative client self-talk embedded in client statements (e.g., "I don't think I could learn very much from an information interview") and observing if clients have difficulty following through on the use of assessment and information resources (e.g., consistently missing scheduled appointments or consistent inability to complete assignments on the ILP) can provide additional data that may confirm a judgment of undecidedness or indecisiveness.

Relating Decision-Making Status in the Taxonomy to Services Needed

Individuals categorized as decided-confirmation or undecided-developmental are more likely to benefit from services that engage the complete CASVE cycle, including developing an awareness of the importance of positive self-talk in successful problem solving. Individuals categorized as decided-implementation are more likely to benefit from services that focus on the Execution phase of the CASVE cycle (planning a preparation program, reality testing, and job placement as appropriate). Individuals categorized as decided-conflict avoidance are more likely to benefit from assistance to challenge and alter an inappropriate coping strategy, followed by services that fit their actual undecided or indecisive decision-making status. Individuals categorized as undecided-deferred choice are more likely to benefit from various career education programs designed to proactively prepare individuals to complete various age-appropriate career development tasks. Individuals categorized as undecided-multipotential are more likely to benefit from services that engage the complete CASVE cycle and focus on potential family or cultural factors that may intersect with the career problem-solving and decision-making process. Individuals categorized as indecisive are more likely to benefit from services that engage the complete CASVE cycle, with particular attention to the problematic impact of anxiety, depression, and negative self-talk on career problem solving. In general, indecisive clients, in comparison with decided and undecided clients, may need more individual assistance from a counselor to make an effective career choice and may also need attention paid to mental health issues (See Chapter 10). In relation to the differentiated service delivery model, decided and undecided individuals are most cost-effectively served by self-help and brief staff-assisted interventions, whereas indecisive individuals are most cost-effectively served by individual case-managed interventions (Sampson et al., 2004; Sampson et al., 2020). The following section of the chapter examines how service delivery tools are designed and used in career intervention.

Service Delivery Tools in Career Intervention[31]

Service delivery tools help individuals make more effective use of career resources in relation to their needs. These tools enable the full implementation of CIP theory in self-help, brief staff-assisted, and individual case-managed career interventions (Sampson, 2008; Sampson et al., 2020). The following sections describe individual learning plans, resource guides, and information handouts.

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[31] Content in this section was used or adapted from Sampson et al., (2004) and Sampson (2008). Used or adapted with permission.

Individual Learning Plans

Individual learning plans (ILPs) are collaboratively used by practitioners and clients to establish goals, identify and sequence resources and services, and monitor progress towards attaining goals. ILPs are used in both brief staff-assisted and individual case-managed services. The use of an ILP distinguishes brief staff-assisted and individual case-managed services from self-help services. Whiston and James (2012) noted the importance of active client participation in the counseling process and clients perceiving the counselor as a guide to the process rather than an authority figure providing answers. Use of collaboratively developed ILPs actively encourages client participation and investment in the service delivery process. An ILP may be referred to by a variety of names, including an "Individual Career Learning Plan," "Individual Action Plan," or "Next Steps Plan." An example of an ILP can be found in Appendix B and on the FSU Tech Center website. Examples of completed ILPs are shown in Chapters 12 and 13 of this book. The following section describes the use of ILPs.

Using Individual Learning Plans

The sequence for completing the ILP is as follows:

1. Collaborate with the client in identifying goals related to their career concern.

2. Collaborate with the client to identify relevant resources or activities.

3. Note the purpose of using a resource or completing specific activities.

4. Note the estimated time commitment to use a resource or complete an activity.

5. Note the goal served by using the resource or completing the activity.

6. After all the above are completed, select a priority order for using resources and completing activities.

After the initial ILP is complete, a client should have increased confidence that the practitioner (a) is concerned about their welfare, (b) is able to help them better understand their career problem, and (c) is knowledgeable about specific resources and services that relate to their career problem and goals.

Successful use of the individual learning plan is dependent on the practitioner's skill in clarifying the clients' needs and recommending appropriate resources and services, as well as using effective helping and communication skills that create a supportive environment where clients believe that a competent person is available who has shown an interest in providing the assistance they need. Collaboration is an important element in creating an effective ILP. When the practitioner makes initial recommendations and then asks the client for their perceptions, the chances are increased that the client will follow through and complete the selected activities and use the specific resources. Having both the practitioner and client sign the ILP further emphasizes the collaborative nature of the service delivery process. Finally, a successful ILP evolves over time. As goals change, some assigned resources and services may no longer be appropriate and need to be replaced and new resources added.

Finally, ILPs provide an important record of career interventions recommended by staff for use by clients. Review of ILPs for specific groups of clients (with names removed), provides

important data that can be used in identifying which career resources and services are being used by various groups of clients being served. This data can then be used in evaluation and staff training.

Resource Guides

Resource guides identify specific career resources (such as assessments and information) and services (such as workshops and individual counseling) that are related to questions commonly asked by persons seeking assistance in career services settings. The resources and services included in the guide should help people obtain the information and assistance they need to make career choices, seek further education, and/or gain employment. When appropriate, resource guides can also recommend a sequence for using career resources and services, such as reviewing an employer's website before completing a job interview. Selection of topics and creation of the guides is based on the expert judgment of practitioners who have knowledge of the content and experience presenting the content to the people they serve.

Resource guides will be most effective if they are developed with the needs, age, and abilities of the intended user in mind. Separate resource guides are typically needed for adolescents and adults. One approach is to create templates on various topics that individual career services settings can customize according to local needs. A potential advantage of this approach is the increased commitment that practitioners have to the resources guides they help develop.

The FSU Career Center resource guides were originally referred to as "module sheets" as part of the instructional design (Peterson et al., 1991) and are now referred to as Quick Guides. A template and example of a resource guide can be found in Appendix C and on the FSU Tech Center website. The following sections examine topics for resource guides, developing an appropriate number of resource guides, design of resource guides, process for creating resource guides, and providing access to resource guides.

Topics for Resource Guides

Resource guide topics will vary depending on the needs and characteristics of the persons served by a career services setting. Sample topics for resource guides include the following:

- Making Career Decisions
- Learning about Yourself
- Learning about Occupations
- Deciding about Education
- Deciding About Training
- Financing Your Education or Training
- Getting a Job
- Studying and Working in Other Countries

Some of the topics listed above may be subdivided as appropriate, such as creating different guides for undergraduate and post-graduate education. Or, topics may be added to meet specific local needs, such as creating a resource guide for a specific group, e.g., persons with disabilities, immigrants, LGBTQ clients, etc.

Developing an Appropriate Number of Resource Guides

It is best to start with a small number of well-developed guides that practitioners have been fully trained in using. Having too many guides can be a problem. New staff can become easily overwhelmed when a large number of guides are available. Also, guides are only effective if they are kept up to date. Given limited staff time typically available to develop resources, maintaining a large number of guides is impractical. In general, no more than six guides should be developed initially. After experience has been gained and the existing guides have been improved, additional guides can be slowly added. New guides should be developed with adequate time available for staff to use the resources and understand how the services are delivered. The optimum range for the number of resource guides for most career services settings is 6 to 12.

Design of Resource Guides

Consistency is essential in designing resource guides. Given the complexity of making career choices, a person may benefit from using more than one resource guide. By having a consistent design for each resource guide, the second guide will be easier to use. Recommended elements of a resource guide include (a) title of the guide, (b) intended learning outcome for the entire guide, (c) actual title of the resource or service, (d) intended learning outcome for using a specific resource or service, (e) description of the resource or service, (f) recommendations for effective use (optional), and (g) the location of the resource. These elements are described as follows:

- The *title* of a resource guide should be short, easy to understand, and clearly indicate the potential use of the guide. Beginning titles with action words, such as "choosing," "preparing," "finding," or "identifying" indicates the behaviors that are necessary to make a career choice or gain employment.

- The *intended learning outcome* for the entire guide should indicate how using the resources and services identified in the guide might help in making a career choice or gaining employment. For example, the purpose of a resource guide on "Getting a Job that Meets Your Needs" might be "Learn the steps to identify, apply for, and make decisions about job openings." A clearly stated and relevant learning outcome should motivate the person to use relevant resources and services that are identified in the guide. The intended learning outcome for the guide can be set apart by lines above and below the learning outcome to help avoid confusion with the intended outcome for using a specific resource or service.

- The *title* of a resource or service helps persons identify the resource in the resource room. The title of web-based resources should include the appropriate URL. The title can be

indicated simply as "*Title*."

- *Learning outcome statements* for a resource or service included on the guide can help persons understand what they might expect from using a resource or service. For example, a learning outcome for "Choosing a Training Program" might be "Learn the steps to find a training program to help you get the skills you need for getting the job you want." Learning outcomes can be important in motivating the person to use the resource. Learning outcomes are based on the professional judgment of experienced practitioners. The learning outcome statement can be indicated on the guide as "*How this resource might be helpful*" or "*How this service might be helpful.*" Efforts among staff to clarify learning outcomes for using resources and services can help practitioners work more effectively in a team environment.

- A short *description* of the resource or service can help persons quickly understand the content of the resource. For some resources and services, the content may not be clearly indicated in the title. The description should indicate the type of resource to make it easier to find a specific item within the resource room. The type of resource may be indicated by beginning the description with "This [*book, file, DVD, information sheet, pamphlet, website…*] [*presents, provides, describes, indicates, shows, illustrates…*]" Using the same format for presenting each resource on the guide makes it easier for the person to read the guide. The description can be indicated on the guide as "*What this resource includes" or "What this service provides.*"

- Providing optional *recommendations for using resources and services* may increase the effectiveness of the guide. For example, a website that helps users self-assess their interests, locate occupations that match their interests, and obtain information on these occupations is more complex than a handout on common job interview questions. Recommendations for effective use may be helpful for the website, but unnecessary for the handout on job interview questions. In addition, some resources are more effective when used in a specific sequence. Reviewing basic occupational information and typical information interview questions before completing an information interview with a person in a specific occupation can help the person ask more focused questions. As with learning outcomes, recommendations for effective use are based on the expert judgment of experienced practitioners. Recommendations for effective resource use can be indicated on the guide as "*Making good use of this resource" or "Making good use of this service.*"

- *Locating* resources and services can be easy or difficult, especially in a large resource room. Identifying the location of the resource or service may be helpful. The location of resources or services can be indicated on the guide as "*Where to find this resource*" or "*Where to find this service.*"

A resource guide can cover one topic or several related topics. An example of a single-topic resource guide would be "Deciding about Education and Training." In this case, the title indicates the topic of the resource guide. Some guides will include several topics. An example of a multiple topic resource guide would be "Getting a Job." This guide could include topics such

as "Organizing a Job Campaign," "Identifying Job Openings," "Writing a Resume," "Writing Letters," and "Negotiating Job Offers." A template for developing a resource guide, as well as an example, is presented in Appendix C. Worksheets are provided to assist practitioners in identifying potential career resources and services for resource guides in Appendix D and Appendix E for creating the elements of guides.

Effective Resource Guide Design

Several factors contribute to designing effective resource guides. These factors include length, clarity, consistency, number of items, links to information handouts, graphics, blank space, alternative formats, and limited purpose. Descriptions of these factors are as follows:

- *Length*: Long and complicated resource guides can be overwhelming to use, especially for adolescents. In most cases, a resource guide should be no more than one or two pages in length. If the guide is two pages long, it should be printed on the front and back of a single sheet of paper. Limiting the length of guides makes them easier to use and requires practitioners to focus on the resources and services that are most likely to be effective.

- *Clarity*: As with signage, resource guides need to be designed from the perspective of persons typically served in the career center or school. What might appear to staff to be clear and concise might be confusing to others. Ensure that the language used in the guide is appropriate for the persons being served. Avoid professional jargon that the person has little or no background knowledge to understand. Obtaining feedback from users is essential in creating effective resource guides. Several revisions of each guide are typically required to make sure that the language level and wording are easily understandable.

- *Consistency*: If resource guides are written by multiple practitioners, one practitioner needs to edit all the guides for clarity and consistency. Having authors review all the initial drafts can help ensure the consistency of the writing. Creating a style guide can help authors to create more consistent first drafts of guides. The previous section on "Design of Resource Guides" can be useful in creating a style guide.

- *Number of items*: The number of resources and services included should be large enough to anticipate typical needs, while not so large that individuals become overwhelmed with options.

- *Links to information handouts*: Specific links to information handouts should be included in resource guides as appropriate.

- *Graphics*: Simple graphics can be used to improve the visual appeal and implied quality of the resource guides. For example, the logo for an organization or an icon that represents the type of resource (website, book, files, information handout, etc.) can be added.

- *Blank space*: Include adequate blank space on each guide. This type of design makes the guide easier to read and appear less overwhelming for persons who may have had difficult past experiences in using print resources.

- *Alternative formats*: Persons with visual disabilities may have difficulty in using the guides. Add a statement at the bottom of the guide that states, "The information on this guide is available in alternative format upon request." Alternative forms include large print versions of the guide or electronic files that can be used with screen readers.

- *Limited purpose*: A common error in creating resource guides involves including information content as part of the guide. For example, a resource guide on "Job Searching" might mistakenly include five characteristics of an effective resume or the steps used in preparing for a job interview. The purpose of the resource guide is only to help users select, locate, and sometimes sequence resources related to their needs. Including content that is also provided on information handouts makes resource guides redundant, complex, and more difficult to update. Redundant information sources also can be confusing.

Process for Creating Resource Guides

The following process can be used by practitioners in creating an initial set of six resource guides:

1. Clarify the purpose of the resource guides and how they will be used with different levels of service delivery (self-help services, brief staff-assisted services, and individual case-managed services).

2. Select the elements that will be included in the guides, such as title, intended learning outcome for the guide, topics included in the resource guide, learning outcome statement for a resource or service included on the guide, description of the resource or service, actual title of the resource or service, and recommendations for effective use.

3. Decide whether the resource guides will primarily be used by adolescents or adults. Guides for adolescents and adults may include similar topics, but the reading level and terminology may vary.

4. Select the topics for each guide.

   - One strategy is to identify the five to six most common questions asked by persons who are served by the career services setting. Revise each of the common questions into a short statement that becomes the title of the guide. For example, "Where can I find information on getting a job?" becomes "Finding a Job."

   - In larger career services organizations, it is often more cost-effective for resource guides to be designed centrally. However, individual career services units should have the option of customizing the guides to better meet the needs of the local population.

5. Identify a practitioner (or practitioners) who will create a rough draft of each guide.

6. Create a first draft of each guide.

   - Write an intended learning outcome for the guide. Input from experienced staff may be helpful in drafting outcome statements.

- Identify resources and services that are relevant for each topic. Avoid including all the resources and services that are relevant to the topic. Practitioners need to use their expertise to select the resources and services that are most likely to be helpful to the broadest range of users. To indicate that additional resources and services are available, a statement can be placed at the bottom of the guide indicating that, "Additional resources are available on this topic in the [*indicate the name of the room*]. Additional services may be available as well." Also, since many resources include multiple topics, a single resource may be included in more than one guide.

- Write a description for each resource and service included on the guide. If appropriate, include recommendations for effective use of the resource.

- If resources and services are best used in a particular sequence, identify the order of resources presented on the guide. Numbers can be used to indicate a sequence, while bullets can indicate that order is unimportant.

- Given that the content of various resource guides is interrelated, refer to other guides where possible. An example would be referring to the "Making Career Decisions" guide on decision-making within the guide on "Choosing a Training Program."

- Resource guides should include referrals to information handouts as appropriate for the topic.

- Resource guides can be adapted for use on a career services setting website. Including descriptions, learning outcome statements, and recommendations for effective use increases the chances that persons using the website will find and use the information they need. Resources and services on a web-based guide can be limited to websites, which allow users immediate access to all the information. Or information on the guide can include reference materials available only at a particular career services setting. The latter option encourages persons to use resources where assistance from practitioners are readily available. Web-based guides do not need to be referred to as "resource guides" on the website. Guides simply become menus that are linked to the home page.

- Do not underline any text on the resource guide except URLs. When the guide is available on a website, users may become frustrated when they assume that underlined text is a link. When resource guides are delivered via the web, URLs should be made active links to facilitate access to resources and services at a distance.

7. Edit each guide, clarifying and simplifying the language whenever possible. A style guide can be used to help check consistency among resource guides.

8. Develop any staff training materials that are necessary for practitioners who are pilot testing the guides.

9. Pilot test each guide with a small number of persons. Obtain feedback in terms of relevance, understandable language, and ease of use.

10. Revise each guide as appropriate.

11. Make any revisions in the staff training materials that are necessary.

12. If appropriate to the setting make print copies of the guides. Some settings will only have online guides and will not use printed versions. For the initial version of the guides, we suggest avoiding the use of photographs or reproducing on glossy paper. While glossy paper does imply quality, this makes the guides more expensive. Guides that are more expensive are typically reproduced in large quantities to minimize costs. Having large numbers of guides makes it less likely that the guides will be kept up to date, as practitioners are typically instructed to "use all of the copies that have been paid for." Use standard size paper for the guides to make it easier to reproduce guides if they are needed quickly.

13. Train practitioners to use the guides.

14. Periodically update the guides as new resources and services become available. Resist the temptation to add new items simply because they are new. Guides that were originally easy to use can become complicated and overwhelming; a simple rule is to remove a resource or service to add a resource or service.

15. Create a priority list for adding new guides. The judgment of practitioners, perceptions of clients, and any conceptual model used in designing career resources and services can be used to suggest additional guides.

16. Include the evaluation of resource guides as part of the evaluation efforts included in Chapter 19.

Providing Access to Resource Guides

Some settings may choose to have resource guides readily available in the career resource room. A kiosk or vertical display rack for disseminating resource guides can be adjacent to the greeter area as well as other high traffic areas in the resource room to maximize access for staff as well as clients. In larger physical spaces, the guides can be available in multiple locations.

Two options exist for providing resource guides on a website. The first option is to create a PDF file that is identical to the version available in a career resource room at a career services setting. Individuals can be encouraged to read the resource guide and bring it with them to use in the resource room. A second option is to adapt the initial paper document for the web by only including links within the website and from external websites that have been judged to provide quality assessments or information.

Information Handouts

Information handouts provide brief, consumable, and easy to use sources of information that can be printed for distribution in a career resource room or disseminated as document files from a website. This section begins with the use of information handouts by level of service delivery and continues with a discussion of the topics and content for information handouts, the elements and design of information handouts, integration of information handouts and resource guides, and providing access to information handouts.

The FSU Career Center's information handouts are referred to as Career Guides. An example of an information handout can be found in Appendix F and on the FSU Career Center website. The following sections examine use of information handouts by level of service

delivery, topics and content for information handouts, design of information handouts, process for creating information handouts, and providing access to information handouts.

Use of Information Handouts by Level of Service Delivery

All levels of service delivery can make use of information handouts. For *self-help services*, practitioners can provide handouts related to specific questions asked by individuals. Individuals can also be directed to specific handouts from resource guides or from a website. Individuals should be encouraged to speak to a practitioner if they have any questions about a handout. The handout can also include typical circumstances when it is appropriate to seek help from a practitioner, such as when the information is confusing or when the information doesn't meet the individual's needs. For *brief staff-assisted services*, specific information handouts can be included in the client's individual learning plan. Since individuals receiving brief staff-assisted services have moderate readiness for career decision-making, practitioners should provide some limited assistance to persons using handouts, such as helping them to (a) understand what they may gain by reading the handout, (b) identify any content in the handout that is especially important given their needs, (c) understand how the handout can be used in relation to other resources and services included on the ILP, and (d) develop a strategy for using what they have learned. It is also important for the practitioner to follow-up with the person to determine if the information was useful and to identify any further resources and services that may be appropriate. For *individual case-managed services*, handouts are used in the same manner described for brief staff-assisted services, with the exception that a higher level of support is provided because of the person's low readiness for career decision-making.

Topics and Content for Information Handouts

Topics and content for information handouts will vary according to the typical needs of persons served in a specific organization or geographic area. Unique aspects of a local or regional labor market, as well as the availability of unique educational and training opportunities, may necessitate editing an existing handout or creating a new handout. One advantage of information handouts is the ability to customize information for a specific population or community. For example, a handout can be created that provides information on education, training, and employment opportunities for recent immigrants who have difficulty speaking the local language. CIP theory can be helpful in creating handouts that involve specific decisions, such as the use of self-knowledge (values, interests, skills, and employment preferences) in making employment decisions. Generic handouts can be developed by a larger career service organization or developed by staff at a specific career services setting to meet specific needs.

Integrating Topics on Information Handouts and Resource Guides

Information handouts and resource guides are most effective when they complement each other. Relevant information handouts should be included on related resource guides and vice versa. Handouts can also refer to resource guides to help persons select and locate additional information they may need. A single handout, such as "Making Informed and Careful Choices" is relevant to several resource guide topics. Table 7.4 shows how information handout topics can be related to resource guide topics.

Table 7.4

Relating Resource Guide Topics to Information Handout Topics

Resource Guide Topics	Related Information Handout Topics
Making Career Decisions	Making Informed and Careful Choices
	Using Career Assessments
	Using Career Information
	Career Choices for Women
	Career Choices for Persons with a Disability
	Career Choices for _____ (Indicate a specific racial, ethnic, or other group)
Learning about Yourself	Using Career Assessments
	Gaining Experience While in School or College
	Getting a Volunteer Job
	Creating a Career Portfolio
	Making Informed and Careful Choices
Learning About Occupations	Locating and Using Career Information
	Conducting Information Interviews
	Using the Internet to Get Career Information
	Gaining Experience While in School or College
	Getting a Summer Job
	Making informed and Careful Choices
Deciding About Education	Going to Community College
	Going to a College or University
	Going to Graduate School
	Choosing a Major or Program of Study
	Getting Financial Aid
	Gaining Experience While in School or College
	Creating a Career Portfolio
	Immigration and Education
	Studying in Other Countries
	Making Informed and Careful Choices

Resource Guide Topics	Related Information Handout Topics
Deciding About Training	Choosing a Training Program
	Going to Vocational/Technical School
	Choosing an Apprenticeship Program
	Choosing a Major or Program of Study
	Getting Financial Aid
	Creating a Career Portfolio
	Making Informed and Careful Choices
Paying for Your Education or Training	Getting Financial Aid
	Getting a Part-Time Job
	Getting a Summer Job
Getting a Job	Developing a Job Search Campaign
	Using the Internet to Search for Jobs
	Writing a Resumé or Curriculum Vitae
	Researching Potential Employers
	Preparing for Job Interviews
	Getting a Volunteer Job
	Getting a Temporary Job
	Dressing for the Workplace
	Searching for a Local Job
	Immigration and Employment
	Working in Other Countries
	Using Career Assessments
	Using Career Information
	Making Informed and Careful Choices
Writing Letters	Negotiation and Evaluating Job Offers
	Making Employment Decisions
Studying and Working in Other Countries	Studying in Other Countries
	Working in Other Countries

Like resource guides, it is better to start with a small number of well-developed information handouts that practitioners have been well-trained in using. It is not necessary to create all the handouts included in Table 7.4. After experience has been gained and the existing handouts are improved, other guides can be added over time.

Cognitive Information Processing: Career Theory, Research, and Practice

Design of Information Handouts

As is the case with resource guides, some persons will use more than one information handout in making a career choice. Handouts will be easier to use if the elements of each document are consistent. Recommended elements of an information handout are as follows:

- *Title*: The title needs to be short and easy to understand. Beginning titles with action words, such as "choosing" or "preparing," implies the behaviors that are necessary to make a career choice or gain employment.

- *Learning Outcome*: A learning outcome should indicate how reading the information will potentially contribute to making a career choice, pursuing education, or gaining employment. A clearly stated and relevant learning outcome should motivate the person to read and use the information included in the handout. The learning outcome statement can be indicated on the guide as "*How this information handout might be helpful.*"

- *Headings*: Headings and subheadings organize content in a way that helps the reader to easily find relevant information, as well as emphasizing any sequence of events, such as the steps in preparing for a job interview. Subheadings should be used when the handout includes many topics or when there are clearly identifiable steps or elements in a process, such as conducting an information interview.

- *Content*: The content of information handouts should help persons obtain the knowledge needed to make career choices and gain employment. The depth of topic coverage should be similar among the information handouts that are available. Because of the variety of possible subjects covered in information handouts, they are often written by several different practitioners. While this approach allows staff to contribute in areas of their expertise and divides the workload, problems can occur when the style, language, and level of detail varies greatly among information handouts. A single editor is needed to ensure that information presented in the handouts is easily understood.

- *Other Resources and Services*. Aspects of making an informed choice are often interrelated. For example, after reading "Locating and Using Career Information" to understand how information can be used in making career choices, individuals may find that reading "Conducting Information Interviews" can help them learn a specific strategy for gaining the information they need. Handouts should identify related information in other handouts that might also be helpful to individuals. Related resource guides should also be identified.

Information handouts can be in the form of stapled sheets of paper, brochures, or booklets, as well as document files, such as PDF files, that can be downloaded from a website. Regardless of how the document is presented, it is important that the content, amount of information, and reading comprehension level in each handout is appropriate for the needs and capabilities of the intended users. As with resources guides, information handouts need to be written in a way that is easily understood by the person who is seeking information. The use of complex writing and professional jargon makes handouts more difficult to read and decreases the chances that the information will be used effectively. Obtaining feedback from users is essential in creating effective information handouts. Pilot testing handouts with clients increases the likelihood that the information will be understandable.

Some individuals have advocated a move towards a "paperless" society where most of the information we use is accessed and stored on computers. While this may be increasingly true for medical records, having a "paperless" career resource room in some settings may not be a practical or effective way of for persons to access and use career information. Print-based resources are easily portable and can be read at convenient times. Print resources can also be easily written upon, allowing users to personalize information by noting specific people or opportunities related to their career choices. The availability of print-based resources in some career services settings is especially important given that many individuals with limited financial resources may not have easy access to a computer. Also, printing pages from a website is more time consuming and costly in comparison with pre-printed handouts. Information that is used regularly by clients should be presented in information handouts, while more specific information related to individual needs can be printed from websites. Computers are best used for finding information, as opposed to reading information on a screen and taking notes.

Some practitioners have decided to create expensive handouts with color graphics and printed on high-quality paper. The idea is that quality presentation creates a perception of quality in the information provided on the handout. The problem is that quality presentation is expensive, and many copies need to be printed to minimize costs. It is better, especially at the start, to create handouts that can be inexpensively reproduced in small quantities. Lower costs and fewer copies printed make it easier to revise handouts as experience is gained in their use with clients. To maximize the cost-effectiveness of developing and presenting information, the same content can be used in both information handouts and the website.

The Process for Creating Information Handouts

Information handouts are created in a manner like resource guides. The process is as follows:

1. Clarify the purpose of information handouts and how the handouts will be used with existing or new resources and services offered by the career services setting.

2. Select the elements that will be included on the handouts, such as title, learning outcome, headings, content, and other resources and services.

3. Create an initial list of topics for the handouts.

4. Select a format for the handouts after considering any differences between print and web-based versions.

5. Identify a practitioner (or practitioners) who will create a rough draft of each handout.

6. Create a first draft of each handout.

7. Edit each handout. When possible, have the handout authors review all the initial drafts as this can help ensure the consistency of the writing and the depth of topic coverage. A style guide, like the style guide for resource guides, can be used to help check consistency among information handouts. The previous section on "Design of Information Handouts" can be useful in creating a style guide.

8. Obtain feedback from the persons who will be consumers of the handouts in terms of relevance and ease of use, and then make revisions as appropriate.

9. Develop any training materials (such as case studies) that are needed by practitioners who are pilot testing the handouts.

10. Pilot test the handouts and make further revisions as needed.

11. Make revisions in staff training materials as needed.

12. Include evaluation of information handouts as part of ongoing evaluation efforts.

Providing Access to Information Handouts

Easy access is important if the information handouts are to be used effectively. For in-person users handouts can be accessed from a display rack or any other location that is readily available to staff or users. A sign indicating "Free Handouts," "Free Information," or "Take Away Information" differentiates the handouts from reference materials that are not to be taken from the career services setting. Having a website where a person can easily locate an information handout, available as a PDF file, provides additional access for the handouts. The following section describes counseling strategies that are particularly relevant to career interventions.

Strategies to Improve the Effectiveness of Career Interventions[32]

This chapter section describes four strategies designed to improve the effectiveness of career interventions. These strategies include enhancement of decision-making readiness, use of the pyramid and CASVE cycle, use of modeling and reinforcement, and use of metaphors.

Strategies for Enhancing Client Readiness for Career Choice and Career Intervention

Readiness for career decision-making, like career maturity, is not a static individual characteristic. Over time, it is possible for the capability of the individual to increase and the complexity of their career problem to decrease. When readiness assessment indicates "that an individual's readiness has been less than optimal, intervention would be directed to remediating those aspects of the individual's readiness that have lagged" (Phillips & Blustein, 1994, p. 65). Savickas and Walsh (1996) stated that career theory needs to go beyond clarifying vocational behavior to include procedures for fostering the career development of clients. Blustein and Flum (1999) stated that "interventions need to help clients attain a readiness to make career decisions and clarify their interests" (p. 362). Gelso and Williams (2022) noted that a primary goal of career interventions is enabling persons to make career decisions over the course of their lifetime.

Practitioners can assist clients in dealing more effectively with the capability dimension of readiness by helping them use the CASVE cycle to learn and practice career problem solving and decision-making with periodic counseling support. Through a supportive relationship with a practitioner, the client will likely be more motivated to identify, challenge, and alter past dysfunctional thoughts that have limited their decision-making capability. The client will also

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[32] Content in this section was used or adapted from Sampson et al., (2004). Used or adapted with permission.

likely be better motivated to follow through with the exploratory behaviors necessary to develop the self-knowledge, options knowledge, and decision-making schemata necessary to make career choices. The practitioner can also assist the client in dealing more effectively with the complexity dimension of readiness by helping the client acquire more-adaptive coping strategies related to family, social, economic, and organizational factors that may have limited their career development. The establishment of an effective helping relationship; collaboration in assessing needs, setting goals, and selecting resources; the use of theory to better understand and manage the decision-making process; the modeling and reinforcement of information-seeking behavior; and framing the problem space in neutral rather than in judgmental terms can help provide the conditions necessary to help clients improve their readiness for career decision-making (Peterson et al., 1996; Sampson et al., 2004).

Use of the Pyramid and the CASVE Cycle in Career Interventions

The Pyramid and the CASVE cycle are mutually used by clients and practitioners to guide both career choices and career interventions. The first, and most basic, schema presented to clients in CIP theory is, "In making a career choice, there are things you need to *know* and things you need to *do*." This simple schema is intended to provide an easy and less threatening starting point for clients who may be overwhelmed with the often complex and high stakes nature of career choices. With this higher-order schema as a foundation, clients are then introduced to the lower-order schema of the Pyramid (what clients need to *know* to make a career choice) with its subordinate elements, and then the CASVE cycle (what clients need to *do* to make a career choice) with its subordinate elements. Figures depicting client versions of the Pyramid (See Chapter 2 of this book or Sampson et al., 2020; Sampson et al., 2023) are used as handouts during career interventions to organize the experience for clients, to begin the process of identifying potentially helpful career resources and services, and to monitor their progress in future sessions. These same figures are used in self-help interventions. The final schema presented to clients is that the intended result of a career intervention is an informed and careful choice which again reinforces the knowing and doing schema introduced at the beginning of the intervention.

Use of Modeling and Reinforcing Information-Seeking Behavior in Career Interventions

Modeling and behavioral reinforcement stimulates information-seeking behavior (Bertoch et al., 2011; Blustein, 1992; Connelly & Reardon, 2020; Crites, 1981; Krumboltz & Schroeder, 1965; Lent, 2020; McHugh et al., 2012; Reardon, 1984; Thoresen & Krumboltz, 1967). Some clients benefit from observing a model that locates and uses career resources. Brown and Krane (2000) noted that "Modeling involves exposing clients to individuals who have attained success in the process of career exploration, decision-making, and implementation" (p. 747). The model can be a fellow client, as in group career counseling, or a practitioner, as in individual career counseling. In a follow-up analysis, Brown et al. (2003), noted that participants should view the models as similar to themselves, including having experienced career decision-making difficulties. These individuals were shown to "more effective models than self-disclosures provided by career counseling professionals' (p. 423). Since clients may be using career resources for the first time, they may have no prior experience to draw upon in knowing

how to obtain and use resources. After initial modeling, clients can then replicate the information-seeking behavior for themselves. One technique to apply in modeling is for a practitioner to use a career resource index, resource map, or signage in a career library to locate career resources even when they know the location of a particular resource and could easily retrieve the item. The client is then knowledgeable about using the index, resource map, or signage to find other career resources. This is a small example of the adage of teaching a person to fish rather than giving them a fish.

Some clients also benefit from being reinforced when they engage in appropriate information-seeking behavior. There are several opportunities to provide reinforcement to clients receiving career services. First, and simplest, the practitioner can ask clients if they are finding the information they need and respond "Good" if the client indicates that they have found an appropriate resource. Second, if a client asks a question, the practitioner can respond with "Good question" and then provide an appropriate answer or suggested exploratory behavior. Third, the practitioner can review the client's ILP and provide verbal reinforcement for activities completed and resources used. Each of these examples provide further opportunities to engage in relationship development, indicating that the practitioner has an interest in the welfare of the client.

Use of CIP-based Metaphors in Career Interventions

Practitioners can use metaphors to provide concrete examples of the relationships among constructs. Two examples of metaphors that can be used in a CIP theory-based approach include fishing and cooking. In Chapter 1 of this book the metaphors of fishing and cooking were used. The fishing metaphor provides a concrete example of the aim of CIP theory of improving individuals' capacity to make both current and future career decisions, e.g., give a person a fish and they eat for day, teach a person to fish and they eat for a lifetime, with CIP theory aiming to teach career decision-making skills that can last a lifetime. The cooking metaphor in Chapter 2 shows the interaction between the content and process of career choice, e.g., the list of ingredients being the pyramid of information processing domains and the steps for combining ingredients being the CASVE cycle. These metaphors are only examples of potential metaphors that can be created. Practitioners can develop their own metaphors to help individuals and clients understand CIP theory concepts as well as those associated with other career theories. The next chapter section examines dual delivery options, both face-to-face and distance modes, for practitioner-based career interventions.

Face-to-Face and Distance Delivery of Career Interventions

CIP theory-based career interventions, including each of the three service delivery levels, can be delivered both face-to-face and at a distance (Osborn, et al., 2021; Sampson, 2008; Sampson & Lenz, 2023). For some persons, the use of ICT applications at a distance provides more convenient access to practitioners, while for others it is a necessity, such as is the case for persons with a disability who have mobility problems or persons living in geographically remote areas (Sampson, Kettunen & Vuorinen, 2020). Some of the technologies used in distance service delivery includes email, text, chat, audio and video interaction, as well as websites, phone apps, and games (Osborn, 2019; Sampson, Kettunen & Vuorinen, 2020; Saunders & Osborn, 2016). During the recent COVID pandemic, many face-to-face career interventions in traditional office

spaces were eliminated or greatly reduced. Some practitioners responded by expanding or adding distance interventions (Osborn et al., 2021). In a short space of time, delivering career interventions at a distance became much more of a necessity than was previously the case. Successfully transforming face-to-face career interventions to distance interventions requires that staff are adequately trained and supervised in the use of ICT applications with clients and that adequate assessments, information resources, and service-delivery tools are available online for clients to use. After the pandemic, some career services allow individuals to choose how they will access practitioner support (either virtual or face-to-face). By continuing to provide virtual services, those persons who find travel difficult can still access career interventions.

During the pandemic, many practitioners utilized a trial-and-error approach to learning new online platforms to identify strategies for reviewing documents from screen sharing to sending documents via chat and/or email communication to then provide comments and feedback to clients. Now, practitioners are adjusting to many services being offered in a hybrid modality (e.g., in person and/or virtual), so it is essential that we examine the efficacy of how those services are provided and move beyond survival mode. While trial-and-error was necessary during the initial phases of the pandemic, we now have the opportunity to transition and investigate what serves individuals seeking career services most productively in the long-term. The following section examines eight critical ingredients of career interventions.

Critical Ingredients of Career Intervention and CIP Theory[33]

Meta-analyses by Brown and Krane (2000), Brown, et al. (2003) and Whiston et al. (2017) showed some overlap and differences in critical ingredients of career intervention, with differences likely caused by variation in method and studies examined. Brown and Krane (2000) found written exercises, individualized interpretations and feedback, information on the world-of-work, modeling, and attention to building support as critical ingredients. Whiston et al. (2017) found critical ingredients that included, counselor support, values clarification, psychoeducation on the steps at arriving at a career choice, workbooks, self-report inventories, counselor dialogue or individual feedback, and provision of world-of-work information. To reconcile these differences in meta-analytic results, and to provide a common structure for examining the potential effectiveness of CIP theory-based career interventions, the meta-analytic-based critical ingredients of career intervention have been synthesized and adapted as follows:

- *Support* - Providing support from practitioners (based on the therapeutic alliance) and encouraging support from significant others (including family, teachers, advisors, and mentors).

- *Assessment* – Practitioner provision of individualized interpretation of self-report assessments, including values clarification.

- *Information* - Provision of career information.

- *Psychoeducation* - Psychoeducation on the steps involved in arriving at a career choice and feedback on client career plans and decision-making strategies.

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[33] Content in this section was used or adapted from Sampson et al., (2020). Used or adapted with permission.

- *Writing* – Completion of workbooks and written exercises.

- *Modeling* - Modeling of career development in terms of how various individuals make choices and how individuals identify, obtain, and use career assessments and information.

Additional evidence of the relevance of support, assessment, information, psychoeducation, writing, and modeling in career interventions is reflected in: (a) numerous career development and learning theories (Brown & Lent, 2020; Gelso & Williams, 2022), and (b) consensus expert judgment contained in professional standards for practitioner competencies and professional standards for accreditation of practitioner preparation programs.

We have also added two additional ingredients of effective career interventions based on the literature:

- *Dosage* – the amount of treatment necessary to produce a positive outcome (Whiston & James, 2012).

- *Intervention fidelity* – the extent to which a career intervention provided in multiple settings is delivered as designed (Domitrovich et al., 2008; Dusenbury, 2005; Sanchez-Flack et al., 2020; Spokane & Nguyen, 2016).

In the following sections, the eight critical ingredients of career intervention are linked to elements of CIP theory, research, and practice. Examples of how these eight critical ingredients apply in practice can be found in the case studies included in chapters 12, 13, and 14 of this book.

Support

In CIP theory the therapeutic alliance is a key aspect of providing effective support to the client. By developing an effective collaborative relationship and mutual respect, the client is better able to process information and benefit from the expertise of the practitioner. An effective relationship also allows the development of trust, helping clients to have faith that their career problem can likely be solved. In this way, the relationship becomes a bridge that spans the gap between where clients are and where they want to be. Isaacson and Brown (2000) stressed the importance of developing an open, trusting relationship based on mutual respect. Liptak (2001) noted the importance of establishing a relationship quickly given the limited number of sessions typically available in career counseling. The development of an effective relationship initiates therapeutic growth in self-esteem and self-efficacy that is necessary for clients to assume personal responsibility for problem solving and decision-making (Crites, 1981). Improved self-esteem and self-efficacy also enhance learning, helping clients to make better use of assessment and career information resources. Drummond and Ryan (1995) suggested that the counselor must create a safe environment for the client where conflicts, ideas, and options can be discussed without pressure. The outcome of this effort is that clients perceive that they have been heard, understood, and that it is safe to return for future sessions. Mutual establishment of client goals, collaborating on strategies to reach the goals, and developing a bond with the client (Bordin, 1979) are included in initial and continuing CIP theory-based practitioner training.

Communication and relationship development skills are essential in establishing goals, collaborating on strategies, and developing a bond (Tang, 2019). The ILP is used to facilitate the

therapeutic alliance for individual case-managed and brief staff-assisted services through collaboration on client goals and the resources needed to achieve those goals. Since the development of a therapeutic alliance may be more difficult for clients with more career decision-making difficulties (Whiston et al., 2016), a larger number of counseling sessions are allocated in individual case managed services. Also, having clients work with multiple practitioners over a several hour period or working with multiple practitioners over several days or months creates some specific relationship and continuity challenges for practitioners in delivering brief staff-assisted drop-in services (Sampson, 2008). The brief nature of drop-in services requires practitioners to have particularly well-developed relationship skills since several hour-long counseling sessions are not available to establish the relationship. Practitioners providing drop-in services need to use similar language in describing goals and resources on the ILP to provide continuity and avoid client confusion that might compromise the therapeutic alliance. Whiston, Rossier, and Baron (2016) recommended frequent revising of goals to maximize the therapeutic alliance. We contend that adding additional goals, as appropriate to the client situation, also enhances the therapeutic alliance. In self-help services, the goal setting and resource selection aspect of the therapeutic alliance is typically carried out via resource guides and related handouts. In terms of client support from significant others, the Decision Space Worksheet (DSW), the Career Thoughts Inventory External Conflict scale, the CTI Workbook, and career course content focus on positive and negative aspects of interaction with significant others. Even if none of the above resources are used, the ILP can be used to identify key support persons which may include family, teachers, advisors, peers, and mentors.

Assessment

When career assessments are used to promote insight (self-knowledge) and generate potentially appropriate options (synthesis-elaboration), the amount and content of the individualized interpretation and feedback provided to clients is influenced by the level of the intervention. With individual case-managed interventions (individual counseling and career courses with small group interaction) more time is provided for discussion and the content is more likely to include the interaction of career, mental health, and family issues. With brief staff-assisted interventions, such as drop-in services or workshops, the interpretation of assessments are shorter in length and are more likely to focus on career issues with less integration of mental health and family issues. In some assessments selected for self-help interventions, such as the Self-Directed Search (Holland, 1997), the interpretation is incorporated into the assessment materials themselves.

Information

When career information resources are used to promote learning (options knowledge), the selection and sequencing of information is collaboratively decided by the client and practitioner and recorded on the ILP in individual case-managed and brief staff-assisted services. The level of intervention influences the pacing of information use. Clients with low readiness for decision-making, learning disabilities, limited literacy or language proficiency, or mental health issues, who are receiving individual case-managed services, typically need more support and a slower pace of information use to avoid being overwhelmed. Clients receiving brief staff-assisted services need less support in information use and can proceed at a faster pace. With practitioners'

monitoring of response to intervention, pacing can be increased or decreased as needed. In self-help interventions, the selection, sequencing, and pacing of information use is at the discretion of the individual with support provided by resource guides (Sampson, 2008). Osborn (2019) identified ICT-based information resources related to each aspect of the Pyramid that can be used in-session or as homework.

Psychoeducation

CIP theory-based schemata identified in the previous section entitled, "Use of the Pyramid and the CASVE cycle" provides the foundation for the CIP theory-based psychoeducational interventions delivered in self-help, brief staff-assisted, and individual case-managed modes. Print and web-based instructional resources in the form of handouts, as well as the resources identified in the "writing" section that follows, are used during sessions and as homework assignments between sessions, with the ILP indicating the purpose, sequencing, and related client goals for each resource. Resource guides link resources to specific needs for individuals receiving self-help interventions. The FSU career course (https://career.fsu.edu/students/plan-your-career/sds-3340-introduction-to-career-development) uses a text based on CIP theory (Reardon et al., 2022) and provides the most structured and comprehensive CIP-based intervention. Instructors provide extensive feedback on client career plans and strategies (Reardon & Lenz, 2018). Given the centrality of learning in cognitive information processing theory, psychoeducation is a critical ingredient in CIP theory-based career interventions.

Writing

Several opportunities exist for clients and individuals to complete workbooks and written exercises. The *Guide to Good Decision-Making Exercise* (https://career.fsu.edu/students/plan-your-career/guide-to-good-decision-making) allows clients and individuals to personalize elements of the CASVE cycle to provide structure in decision-making (Adapted from Sampson et al., 1992). The *Career Thoughts Inventory Workbook* provides psychoeducation on decision-making and a cognitive restructuring exercise on negative career thinking (Sampson et al., 1996b) linked to the Career Thoughts Inventory (Sampson et al, 1996a). Written assignments in the FSU career course allow students to reflect on information they have gained about themselves through career assessments and information gained on their options from various data sources and information interviews of employed persons (based on the Pyramid), as well as a creating and receiving feedback on a strategic career plan (based on the CASVE cycle) (Reardon et al., 2022).

Modeling

In CIP-based interventions, practitioners model information-seeking behavior by showing clients how to use computer indexes and signage to locate information instead of more quickly locating information for the client (Sampson, 2008). Practitioners are encouraged in training and supervision to make judicious use of self-disclosure regarding positive and negative aspects of their own career exploration when this is directly related to an aspect of clients' career exploration (Sampson et al., 2004). By using self-disclosure, the practitioner is facilitating relationship development and further contributing to the therapeutic alliance with the client. In

the CIP-based career course, the small groups led by co-instructors provide opportunities for modeling where students learn from observation and discussion (Reardon & Lenz, 2018). Students who viewed a video-based model engaged in information-seeking behavior increased the type and frequency of career information seeking in comparison with students in a control group (Fisher et al., 1976; McHugh et al., 2012).

Dosage

Since most career services in CIP theory's differentiated service delivery model are delivered in brief staff-assisted and self-help modes, practitioner time is available for increased dosage in individual case-managed services. Having more time available for scheduled individual counseling appointments allows more sessions to deal with more complex career problems (Sampson et., 2017). Also, since drop-in services are not appointment based, clients determine dosage in the amount of time they choose to interact with practitioners. Readiness assessment and response to intervention are crucial in determining the appropriate dosage in relation to client needs (Sampson et al., 2020).

Intervention Fidelity

As we stated earlier, intervention fidelity is the extent to which a career intervention provided in multiple settings is delivered as designed (Sampson, Osborn, et al., 2020; Spokane & Nguyen, 2016). With the application of CIP theory in the FSU Career Center, intervention fidelity is primarily maintained through training and supervision. After completing an initial training experience, where new practitioners demonstrate basic competencies, most staff members attend weekly training sessions where new career resources and counseling strategies are reviewed, as well as changes in policy and procedures are discussed. While less explicit than a strict manualized treatment, CIP theory is explicit in the type and amount of service provided for various career problems. Monitoring of intervention fidelity occurs in supervision that is required of all practitioners offering services to clients in the Career Center resource room (Sampson, et al., 2020). The next section of the chapter examines ethical issues specifically related to CIP-theory.

Understanding and Resolving Potential Ethical Dilemmas in Career Intervention

Career practitioners must deal with a wide variety of ethical issues in providing career interventions (Swanson & Fouad, 2019; Tang, 2019). Ethical dilemmas arise most often in career interventions not due to malintent or intentional misbehavior. Rather, they arise simply because practitioners live and work in a complex world that presents "ill-structured" problems that cannot be resolved with a high degree of certainty (King & Kitchener, 1994). We can be presented with a variety of priorities that sometimes compound, pulling us in differing directions. Perhaps we are asked to respond to a new situation, not encountered before. We may be asked to respond to a situation where details, relationships or environmental norms are unclear, and we do not know what pieces we are missing. An ethical dilemma then, is simply a situation that presents a challenge in which a career practitioner must "choose between two or more courses of action, striving to find the most appropriate solution" (Makela & Perlus, 2017, p. 7) that upholds ethical standards, professionalism, and values. Ethical dilemmas require us to engage a decision-making process.

Those familiar with the CASVE cycle for persons engaged in career decision-making may find interesting parallels with common components of ethical decision-making models. Makela and Perlus (2017) reviewed a variety of ethical decision-making models and presented nine common components found across different approaches. We offer a brief discussion of ethical decision-making models and their application to practice from a CIP theory-based perspective in this section of the chapter. For a more in-depth discussion of ethical decision-making and applications to practice, see the ethics case study monographs from Makela and Perlus (2017) and Makela (2009).

Relating Ethical Decision-Making Models to CIP Theory

Ethical decision-making models are designed to aid professionals in thinking purposefully and systematically about ethical dilemmas. These models present elements or components that contribute to a holistic response, while stimulating reflection and conversation. Often the most effective ethical decisions are made in consultation with colleagues, codes of ethics, professional standards, or input from key theories and guidelines (Niles & Bowlsbey, 2022). When faced with a dilemma, it is important for practitioners to remember that they are not alone; they are not the only one facing these issues. Practitioners are a part of a broader community and profession that can support, guide, and advocate for our clients with us.

Let's begin exploring common components of ethical decision-making models using a framework that is now familiar to readers of this book – the CASVE cycle presented in Chapter 2. Table 7.5 illustrates relationships between the two types of decision-making models (Makela & Perlus, 2017). Because there is value in building upon learning structures and relationships, we'll briefly introduce the ethical decision-making components and link them to the CASVE cycle structure.

Table 7.5

Relating Ethical Decision-Making Model Components to the CASVE Career Decision-Making Model

CASVE Cycle Component	Common Component(s) of Ethical Decision-Making Models
Communication	▪ Identify and define the problem ▪ Tune into feelings
Analysis	▪ Consider foundational ethical principles ▪ Consult the code of ethics ▪ Seek appropriate consultation
Synthesis	▪ Identify desired outcomes
Valuing	▪ Consider possible actions and consequences
Execution	▪ Select and implement an action
Communication	▪ Document process and reflect on the outcomes

Communication

Ethical decision-making begins with the recognition that a gap exists – an issue has arisen that requires deliberation regarding the most appropriate response or course of action. This recognition may be triggered by external cues from the environment (e.g., a question or request from a client, supervisor, or colleague) or by an internal cue (e.g., feelings that arise indicating uncertainty or discomfort). The first step in ethical decision-making is developing a clear understanding of the dilemma that is arising, the stakeholders involved, and to monitor the ebb and flow of emotions throughout the process in order to engage in self-care.

Analysis

Once an ethical issue and its components are defined, the next step is to gather information to inform potential responses. As advocated by Makela and Perlus (2017), "even if feeling pressured to act quickly, most often it is reasonable and advantageous to take time to consider the situation" (p. 12). This step may be especially important when there are conflicting ethical mandates both in terms of ethical codes and standards, as well as a practitioner's personal moral values (Swanson & Fouad, 2019). A variety of resources and supports can be useful. For example, practitioners may *reflect on foundational ethical principles to help inform an understanding of the issues at hand*. These principles include:

- Nonmaleficence: Do no harm; Avoid actions that put clients at risk

- Beneficence: Actively do good for others; promote positive growth

- Respect for Autonomy: Promote client's rights to determine their own directions

- Justice: Commitment to equality and fairness

- Fidelity: Honoring commitments made to clients

- Veracity: Truthfulness, honesty, and transparency

Which foundation ethical principles are particularly relevant to the current situation? What insights do these provide into sources of tension and/or discomfort? Practitioners may also *consult related codes of ethics and professional standards* in order to see the current best thinking and standards of practices related to the issue. *Seeking appropriate consultation from supervisors, colleagues, and/or ethics committees* can also be helpful at this time. These networks can help a practitioner reflect on the application of foundational ethical principles, codes of ethics, and professional standards to their unique situation.

Synthesis

Using the information gathered, the next step in ethical decision-making is to identify the ideal outcomes that would emerge when the ethical dilemma is resolved. Very rarely will there be only one desired outcome. Rather, several outcomes will often exist, potentially with different outcomes for different stakeholders. It may be necessary to prioritize outcomes, recognizing that not all may be immediately achievable.

Valuing

With prioritized outcomes in mind, the next step is to consider the costs and benefits of possible actions for responding to the ethical dilemma, remembering that "do nothing" is a potentially appropriate option. Consider potential actions in light of previous activities, including: (a) the information gathered, (b) the ethical code, standards, and policy documents reviewed, (c) the insights gained from consultations, and (d) the outcome priorities determined. Consider the negative and positive consequences for each action that may come in many forms (economic, psychological, social, time, and resources, both short-term or long-term). Eliminate any actions that do not lead to desired outcomes or lead to undue negative consequences. Finally, weigh the risks and benefits of the remaining options, ask which course of action has the greatest potential to lead to desired outcomes in this unique situation.

Execution

Specific actions are then selected to address the ethical dilemma and a plan is developed to carry it out. Plans may have several steps, such as involving the client in the resolving action, informing supervisors and employers, and creating written records.

Revisiting Communication

Implementing action plans to respond to ethical dilemmas can require strength and conviction. It is important to attend to feelings throughout this process, checking on internal cues to monitor progress. Practitioners may also turn to colleagues for support and guidance along the way. Documentation is also important throughout the ethical decision-making process to record summaries of each step taken: describing the problem, considering conditions which signaled an

ethical dilemma, outlining information gathering and consultation, demonstrating a consideration of options, and justifying the actions ultimately taken. This documentation serves two functions. First, it serves as evidence of a clear, reasoned course of action. Second, and perhaps more importantly, documentation aids in reflection, helping to confirm that the initial identified gap has been addressed and to enhance learning that may be applied to future ethical dilemmas.

Supportive Relationship Between Ethical Guidelines and CIP Theory

One way for career practitioners to enhance ethical practice is to guide their work with connection to career theory. Theories provide a framework for understanding and effectively navigating the challenges faced by clients who seek our assistance (Brown & Lent, 2020; Gelso & Williams, 2022; Swanson & Fouad, 2019; Tang, 2019). This section highlights examples of ways that CIP theory helps guide career professionals toward ethical practices that reflect best practices in the career development field.

Example 1: Assessing Readiness for Career Choice to Differentiate Career Interventions

A core component of CIP theory is recognizing the importance of assessing an individual's career choice readiness and matching them with the level (self-help, brief staff assisted, individual case managed) and type of career intervention that is a best fit for their needs. Some foundational ethics principles considered in these efforts include:

Justice. Recognizing that staffing and resources are limited, staff support should meet, but not exceed, the needs of the individual (Sampson, 2008). As such, right-sizing career services to the needs of each individual allows career practitioners to reach a wider array of clients, focusing greater attention and resources on those with the greatest needs (Toh & Sampson, 2021). This demonstrates a commitment to equity, fairness, and social justice.

Veracity. Veracity relates to being honest and transparent in our work with individuals seeking career services. CIP theory encourages career practitioners to have a clear way to describe the various types of services offered, their purposes, goals, formats, and how and when individuals move between them.

Example 2: "Safety net" Across Service Delivery Levels

Within the service delivery sequence (see, for example, Figure 7.2), CIP theory advocates for regular identification of individuals not making successful use of career resources (Sampson, 2008) in a self-help or brief staff-assisted modality. Career practitioners may then engage with these individuals to provide more comprehensive screening or a higher level of service in order to better meet their needs. When individuals make successful use of resources independently, they may then move to a lower level of staff assistance. Some foundational ethics principles considered in these efforts include:

Respect for Autonomy. Individuals move to self-help services (or brief staff-assisted) when they have a concrete request for information and do not indicate a specific problem pursuing their next steps (Sampson, 2008). There is a bias toward supporting and encouraging the client to actively pursue their chosen directions, and to build their career decision self-efficacy in the process.

Beneficence. CIP theory also encourages career practitioners to stay active and attentive in their relationship with individuals seeking services. Career practitioners actively seek to promote good by observing individuals for signs of struggle, checking-in to see if support is needed, and being ready and available to change the level and direction of support if the individual indicates a need.

Example 3: Individual Learning Plan (ILP) and Record Keeping

The ILP serves as a foundational tool used by the career practitioner and the individual receiving services to collaboratively identify goals, as well as outline steps, resources, and services to help achieve those goals. Within brief staff-assisted services, this document remains with the individual receiving services so that they may track their personal progress and move between service providers, seeking assistance as their needs evolve. Those engaged in individual case-managed services have a copy of their ILP included in their individual case records. Some foundational ethics principles considered in these efforts include:

Fidelity. Fidelity refers to honoring commitments made once a career practitioner and individual enter into a helping relationship. The ILP helps both individuals and practitioners clearly understand the goals of their work together, and the steps to take to achieve those goals. Along the way, the ILP can be adjusted as needed and focus areas may change. However, changes are made by engaging in a dialogue with the client to achieve mutual understanding.

Nonmaleficence (Do no Harm). Reflections on nonmaleficence can often be highlighted when we think about data and record keeping. It is important for career practitioners to think about data management related to service delivery. How do we protect our clients' privacy and confidentiality? One rule of thumb can be to limit data collection to information that is essential to the provision of high-quality service for the individuals that seek our assistance. In the case of ILPs, note that it is recommended that copies of these documents are only recommended to be kept by career practitioners for individuals who are being seen on an individual case-managed basis – those who are working repeatedly with the same individual, building upon previous meetings. Other individuals who receive services at a lower level of intensity maintain their own identifiable personal data, with only "aggregated data [collected] for program evaluation and accountability" (Sampson, 2008; Sampson & Lenz, 2023) (See Table 7.2). The next section of the chapter presents sources of evidence of the efficacy of CIP theory-based interventions.

Evidence Supporting the Validity of CIP Theory-Based Career Interventions[34]

The most robust evidence-based practice for CIP theory exists for the FSU career course (Brown, 2015; Reardon & Lenz, 2018). Numerous studies have shown the efficacy of this course for various career decision-making outcomes. Evidence also exists for the efficacy of self-help interventions (Kronholz, 2015; Reardon, 2017) and brief staff-assisted interventions (Osborn et al., 2016). Werner (2019) provided support for the use of the CASVE cycle noting that individuals who following the CASVE cycle model in a theoretically consistent order were found to have higher vocational identity levels and less negative thinking. For additional research studies on evidence-based practice for CIP theory, see the CIP Theory and Evidence-Based

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[34] Content in this section was used or adapted from Sampson et al., (2020). Used or adapted with permission.

Practice section of the CIP Bibliography (Sampson et al., 2023). A spreadsheet is also available online that provides a summary of <u>research studies on evidence-based practice for career interventions using CIP theory</u>. The next section of the chapter examines distinctions in how different types of evidence on efficacy can be used in designing career interventions.

The Role of Best Practices and Evidence-Based Practice in Designing Career Interventions

As career practitioners design career interventions, they have access to a variety of sources of information to inform their practice. Actively embracing theory, best practices, and evidence-based practices as a collection of tools, results in more competent and responsible practice in career intervention.

To begin, the value of starting with *theory* is that it provides a foundation for understanding and effectively navigating the career development challenges individuals face. In the delivery of career interventions, career theory can be used to understand the expressed needs, strengths, and gaps experienced by individuals. For example, CIP theory provides information about readiness for career decision-making, and insights on how we may work collaboratively to help the individual address their needs. It is important to be flexible within our theoretical approaches and understandings – ready to adapt if initial understandings do not lead to expected progress.

Using a theoretical foundation as a starting point, *best practices* aggregate the expertise and judgments of practitioners familiar with career interventions in the form of recommendations for practices that are most likely to result in desirable outcomes. An example of this aggregate expertise and judgments would include standards approved by professional associations for service delivery, training, and ethics (Niles & Bowlsbey, 2022). Benchmarking with career offices or institutions that have implemented best practices, or applied theory to practice, in a similar environment may be especially helpful. Gathering information and experiencing successes through the lens of colleagues can help motivate practitioners and shape intervention design.

Finally, the component of *evidence-based practice* helps translate best practices to a specific service delivery environment. Evidence-based practice calls for the systematic collection and interpretation of evidence (e.g., qualitative or quantitative data) to explore the effectiveness of a career services intervention (Makela & Rooney, 2012). Evidence-based practice is important because career services interventions are not one-size-fits-all; different clients in different service settings respond to interventions in different ways. It is the responsibility of career practitioners to monitor and evaluate the effectiveness of their career interventions for their unique settings and client populations (Heibert, 1994; Niles & Bowlsbey, 2022; Robertson, 2020). Evaluation of career services interventions in ways that contribute to evidence-based practice is discussed in greater detail in Chapter 19. The final section of this chapter presents examples of the application of CIP theory in practice.

Examples of the Application of CIP Theory in Practice[35]

Numerous descriptions exist of the use of CIP theory in delivering career interventions to young people, adults, persons with disabilities, persons of diverse cultural, racial, and ethnic identities, academic advisees, unemployed persons, offenders transitioning from incarceration, and veterans. These CIP theory-based applications occurred in various settings, including secondary schools, higher education, government agencies, and organizations, in the United States and other countries. In addition, case studies of CIP theory applications are provided by Kronholz (2015), Leierer et al. (2022), Sampson et al. (2004), and Watson, et al. (2013). Osborn (2020) provided a wide variety of applications of CIP theory in international contexts. Examples of the integration of CIP theory with RIASEC theory are provided by Reardon and Lenz (2015), Hayden (2018), and Reardon and Wright (1999). For additional examples, see the [CIP Bibliography](#) sections (Sampson et al., 2021) that are devoted to CIP applications and CIP-Based Assessments. (See Chapter 15 of this book for more detailed information on international applications of CIP theory.)

Chapter 7 Summary

This chapter began with a rationale for making the level of practitioner support congruent with individual needs. It then related the two-dimensional model of readiness for career choice presented in Chapter 4 to three levels of differentiated service delivery (self-help services, brief staff-assisted services, and individual case-managed services). Specific attention was paid to screening and assessing decision-making readiness in relation to the differentiated model. The delivery of self-help services, brief staff-assisted services, and individual case-managed services was then examined in more detail. A four-step model for practitioner interventions to promote effective client use of assessments and information was then presented, followed by a discussion of social justice issues in career interventions and the use career decision taxonomies in service delivery. Next, three service delivery tools (individual learning plans, resource guides, and information handouts) were described. After a presentation of four counseling strategies for improving the effectiveness of career interventions, the provision of face-to-face and distance interventions were discussed. The chapter concluded with the critical ingredients of career interventions, the use of evidence-based practice, best practices in designing interventions, and examples of the application of CIP theory in practice.

Getting the Most Benefit from Reading Chapter 7

To effectively learn the material in this chapter, complete one or more of the following activities:

- Draw and label Figure 7.1.

- Draw and label Figure 7.2.

- Describe self-help services, brief staff-assisted services, and individual case-managed services. What has been your own experience with any of these career services?

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- Explain how screening and assessment of decision-making readiness can improve the effectiveness of career interventions.

- Explain how the four-step model for practitioner interventions to promote effective client use of assessments and information contributes to intervention effectiveness.

- Explain how career intervention design potentially contributes to, and detracts from, social justice.

- Compare and contrast decided, undecided, and indecisive individuals.

- Explain the design and use of CIP theory-based service delivery tools.

- Explain how the four counseling strategies mentioned in the chapter contribute to the improvement of career interventions.

- Explain how face-to-face and distance career interventions are similar and different.

- Briefly describe the eight critical ingredients of career intervention.

- Explain the similarities and differences between evidence-based practice and best practices.

- Identify a source of regularly updated information on the application of CIP theory in practice.

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Appendix B
Individual Learning Plan

Continue on the following page.

From: *Cognitive Information Processing: Career Theory, Research, and Practice*, Chapter 7 (https://doi.org/10.33009/fsop_sampson1123.ch07).

Individual Learning Plan[36]

[Insert Name and Address of the Career Service Organization]

Goal(s): #1 _____

#2 _____

#3 _____

Resource, Activity, or Service	Purpose	Estimated Time Required	Goal #	Priority

The purpose of this plan is to select resources and services that may be useful for making a career choice. Activities or resources included on the plan can be added or subtracted as needed.

Name	Date	Staff Member	Date

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Appendix C
Template and Example of a Resource Guide

Continue on the following page.

From: *Cognitive Information Processing: Career Theory, Research, and Practice*,
Chapter 7 (https://doi.org/10.33009/fsop_sampson1123.ch07).

<u>Template for a Resource Guide</u>[37]

[Title of the Guide]

[Intended learning outcome for the guide]

Title: [Title of the resource.]

   How this resource might be helpful:

   What this resource includes: [This (*book, information handout, file, video, Web site, computer system, etc.*) (*presents, describes, explains, etc.*) (Add text)].

   Making good use of this resource: [Optional]

   Where to find this resource: [Indicate the location of the resource in the resource room or on the Internet]

Name: [Name of the service.]

   How this service might be helpful:

   What this service provides: [This (*workshop, counseling group, course, resume critique session, etc.*) (*presents, describes, explains, assists, helps, etc.*) (Add text).

   Making good use of this service: [Optional]

   Where to find this service: [Indicate the location of the resource in the resource room or on the Internet]

Additional resources are available on this topic in the [*indicate the name of the room*]. Additional services may also be available. The information on this guide is available in alternative format upon request.

Learning about Occupations[38]

This resource guide identifies resources for learning about occupations. Understanding occupations can help in narrowing the number of occupations you are considering and in preparing for job interviews.[39]

Title: Occupational Outlook Handbook

    How this resource might be helpful: Learn how to compare one occupation with another occupation and then identify additional sources of in-depth information.

    What this resource includes: This Web site presents information on work tasks, working conditions, education and training requirements, typical employers, earnings, and employment outlook for common occupations.

    Making good use of this resource: Read the introduction section of no more than five occupations that you would like to compare. Pick the three most appealing occupations and read the entire description. How are these occupations similar or different?

    Where to find this resource: On the Internet at http://www.bls.gov/oco

Name: Information Interview Service

    How this service might be helpful: Information interviews can provide personal, up-to-date, and specific information from a person who is actually working in an occupation. The interview can help you answer questions to clarify what you already know and ask new questions.

    What this service provides: This interview service can help you identify persons in the community who are willing to answer questions about their work in a specific occupation.

    Making good use of this service: Reviewing information about the occupation before the interview helps you ask more specific questions and make better use of the time you have available.

    Where to find this service: A list of persons who provide interviews are available on our Web site at http://www.careerresourcesandservices.com/informationinterview [Not an actual link] or on a list available in the career resource room.

Additional resources are available on this topic in the career resource room. Additional services may be available as well. The information on this guide is available in alternative format upon request.

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[39] An actual resource guide would include further resources and services with a total limit of two pages for any one guide.

Appendix D
Identifying Potential Career Resources and Services for Resource Guides

From: *Cognitive Information Processing: Career Theory, Research, and Practice*,
Chapter 7 (https://doi.org/10.33009/fsop_sampson1123.ch07).

Identifying Potential Career Resources and Services for Resource Guides[40]

<u>First</u> resource guide title: _____

Information Handouts[41]

   1) _____   2) _____

   3) _____   4) _____

   5) _____   6) _____

Printed Materials (Such as pamphlets and brochures)

   1) _____   2) _____

   3) _____   4) _____

   5) _____   6) _____

Books

   1) _____   2) _____

   3) _____   4) _____

   5) _____   6) _____

Web Sites

   1) _____   2) _____

   3) _____   4) _____

   5) _____   6) _____

Computer Programs

   1) _____   2) _____

   3) _____   4) _____

   5) _____   6) _____

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[41] Spaces are provided to identify <u>potential</u> career resources and services. The number of resources and services included on each guide should be large enough to anticipate typical needs, while not so many that individuals become overwhelmed with options. It is <u>not</u> necessary to fill in all of the spaces included on this worksheet.

DVDs/Videos

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Services

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

<u>Second</u> resource guide title: _____

Information Handouts

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Printed Materials (Such as pamphlets and brochures)

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Books

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Web Sites

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Computer Programs

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

DVDs and Videos

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Services

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

<u>Third</u> resource guide title: _____

Information Handouts

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Printed Materials (Such as pamphlets and brochures)

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Books

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Web Sites

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Computer Programs

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

DVDs Videos

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Services

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

<u>Fourth</u> resource guide title: _____

Information Handouts

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Printed Materials (Such as pamphlets and brochures)

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Books

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Web Sites

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Computer Programs

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

DVDs and Videos

1) _____ 2) _____

3) _____ 4) _____

5) _____ 6) _____

Services

1) _____ 2) _____

3) _____ 4) _____

5) _____ 6) _____

<u>Fifth</u> resource guide title: _____

Information Handouts

1) _____ 2) _____

3) _____ 4) _____

5) _____ 6) _____

Printed Materials (Such as pamphlets and brochures)

1) _____ 2) _____

3) _____ 4) _____

5) _____ 6) _____

Books

1) _____ 2) _____

3) _____ 4) _____

5) _____ 6) _____

Web Sites

1) _____ 2) _____

3) _____ 4) _____

5) _____ 6) _____

Computer Programs

1) _____ 2) _____

3) _____ 4) _____

5) _____ 6) _____

DVDs and Videos

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Services

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

<u>Sixth</u> resource guide title: _____

Information Handouts

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Printed Materials (Such as pamphlets and brochures)

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Books

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Web Sites

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Computer Programs

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

DVDs and Videos

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Services

1) _____   2) _____

3) _____   4) _____

5) _____   6) _____

Appendix E
Resource Guide Workseet

Continue on the following page.

From: *Cognitive Information Processing: Career Theory, Research, and Practice*,
Chapter 7 (https://doi.org/10.33009/fsop_sampson1123.ch07).

Resource Guide Worksheet[42]

Title of the Guide _____

[Intended learning outcome for the guide] _____

_____

<div style="background:gray"> </div>

Title of the **first** resource _____

How this resource might be helpful _____

_____

What this resource includes _____

_____

_____

Making good use of this resource [Optional] _____

_____

_____

Where to find this resource_____

<div style="background:gray"> </div>

Title of the **second** resource _____

How this resource might be helpful _____

_____

What this resource includes _____

_____

_____

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[42] From Sampson, J. P., Jr. (2008). *Designing and implementing career programs: A handbook for effective practice*. Broken Arrow, OK: National Career Development Association. © 2008 National Career Development Association. Permission is granted by the National Career Development Association to reproduce this handout for non profit use.

Making good use of this resource [Optional] _____

_____

_____

Where to find this resource _____

Title of the **<u>third</u>** resource_____

How this resource might be helpful _____

_____

What this resource includes _____

_____

_____

Making good use of this resource [Optional] _____

_____

_____

Where to find this resource _____

Title of the **<u>fourth</u>** resource _____

How this resource might be helpful _____

_____

What this resource includes _____

_____

_____

Making good use of this resource [Optional] _____

_____

_____

Where to find this resource_____

Title of the **<u>fifth</u>** resource _____

How this resource might be helpful _____

_____

What this resource includes _____

_____

_____

Making good use of this resource [Optional] _____

_____

_____

Where to find this resource_____

Title of the **<u>sixth</u>** resource_____

How this resource might be helpful _____

_____

What this resource includes _____

_____

_____

Making good use of this resource [Optional] _____

_____

_____

Where to find this resource_____

Name of the **<u>first</u>** service _____

How this service might be helpful _____

_____

What this service provides _____

_____

_____

Making good use of this service [Optional] _____

_____

_____

Where to find this service _____

Name of the **<u>second</u>** service _____

How this service might be helpful _____

_____

What this service provides _____

_____

_____

Making good use of this service [Optional] _____

_____

_____

Where to find this service _____

Appendix F
Example of an Information Handout

From: *Cognitive Information Processing: Career Theory, Research, and Practice*,
Chapter 7 (https://doi.org/10.33009/fsop_sampson1123.ch07).

Information Interviews[43]

How this information handout might be helpful

Information interviews can help you explore your options in the following ways:

▪ Getting valuable information for your job hunting and career planning (e.g. choosing an academic major or career). It's a good way to "reality check" what you've read, heard, and think.

▪ Learning about a particular organization, how you might fit in, and what problems or needs the employer has. Knowing these things will help you slant your qualifications towards the needs of the organization.

▪ Gaining experience and self-confidence in interviewing with professionals through discussing yourself and your career interests.

▪ Enlarging your circle of "expert" contacts in the area. Remember, it is who you know (or get to know) that gets you a job. It's never too early to establish contacts.

▪ Asking for other referrals (e.g., "Can you suggest some other people that I might talk to about jobs in this field?")

An information interview is an appointment that you schedule with a particular individual for the purpose of gaining current, regional, and/or specialized information from an "insider" point of view. If you are in the process of choosing an academic major, making career choices, changing careers, or beginning a job hunt, then information interviews may help you explore your possibilities. Unlike job interviews, information interviews do not require that you sell yourself to an employer and do not depend on existing job vacancies. Information interviews are arranged with those likely to provide information directly or with those who can refer you to persons with information.

Who might I contact?

▪ Identifying who to talk to often blocks people from doing information interviews. ("I don't know anyone in this field..."). Look for those who:

▪ Share a common academic major or interest, enthusiasm, or involvement in some activity or lifestyle that appeals to you...or

▪ Work in a setting you like (e.g., hospitals, textile company, colleges, airlines)...or

▪ Work in career areas you're interested in (e.g. counseling psychologist, market researcher, public relations)... or

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- Work in specific jobs in specific organizations (e.g., counseling psychologist at a university counseling center, consumer education representative at a utility company, market researcher at IBM).

Where do I find potential contacts?

- Ask friends, family, neighbors, colleagues, former employers... anyone you know for an information interview or for a referral.

- Contact faculty, Career Center personnel, or other University offices. Use the Career Center's Seminole Connection network (www.career.fsu.edu) to find alumni and other individuals willing to speak with you. Career Placement Services also has the names of many employer contacts. Review employer business cards in the Career Library.

- Call community service agencies, trade and professional organizations (e.g., women's organizations, Chamber of Commerce, Information Management Association) or review their Web sites.

- Scan the Yellow Pages, articles in newspapers, magazines, and journals.

- Attend meetings (local, state, regional) for professional associations in your career interest field(s).

How should I prepare?

Remember, people are generally interested in talking about what they do and how they do it. But, don't waste their time or your time — be prepared! Know your interests, skills, values and how they relate to the career field represented by the persons you're interviewing.

- Read about the career area and organization of the person you'll be interviewing. Know exactly what kinds of information you want by having a list of questions in mind. Generally, don't ask something routine that is readily available elsewhere. Check materials in the Career Center, Strozier, and other local libraries for print information. If no print materials are available, you may want to call and ask the organization to send you any literature they might have (annual report, promotional brochures, etc.). Also check the Internet for any Web sites associated with the organization or career field in which you're interested. Use the following list of questions to help in formulating your own.

What questions could I ask during the information interview?

- (Background) Tell me how you got started in this field. What was your education? What educational background or related experience might be helpful in entering this field?

- (Work Environment) What are the daily duties of your job? What are the working conditions? What skills/abilities are utilized in this work?

- (Problems) What are the toughest problems you deal with? What problems does the organization as a whole have? What is being done to solve these problems?

- (Life Style) What obligation does your work put on you outside the work week? How much flexibility do you have in terms of dress, work hours, vacations?

- (Rewards) What do you find most rewarding about this work, besides the money?

- (Salary) What salary level would a new person start with? What are the fringe benefits? What are other forms of compensation (bonuses, commissions, securities)?

- (Potential) Where do you see yourself going in a few years? What are your long term goals?

- (Promotional) Is turnover high? How does one move from position to position? Do people normally move to another company/division/agency? What is your policy about promotions from within? What happened to the person(s) who last held this position? How many have held this job in the last five years? How are employees evaluated?

- (The Industry) What trends do you see for this industry in the next three to five years? What kind of future do you see for this organization? How much of your business is tied to (the economy, government spending, weather, supplies, etc.)?

- (Advice) How well suited is my background for this field? When the time comes, how would I go about finding a job in this field? What experience, paid or volunteer, would you recommend? What suggestions do you have to help make my resume more effective?

- (Demand) What types of employers hire people in this line of work? Where are they located? What other career areas do you feel are related to your work?

- (Hiring Decision) What are the most important factors used to hire people in this work (education, past experience, personality, special skills)? Who makes the hiring decisions for your department? Who supervises the boss? When I am ready to apply for a job, who should I contact?

- (Job Market) How do people find out about your jobs? Are they advertised in the newspaper (which ones?), on the Web? by word-of-mouth (who spreads the word?) by the personnel office?

- (Referral to Other Information Opportunities) Can you name a relevant trade journal or magazine you would recommend I review? What professional organizations might have information about this career area?

- (Referral to Others) Based on our conversation today, what other types of people do you

believe I should talk to? Can you name a few of these people? May I have permission to use your name when I contact them?

- Do you have any other advice for me?

- Other questions you want to ask

How do I arrange the interview?

- Phone or write (this could include sending an e-mail) to explain your request and obtain an appointment. Letter requests for appointments are most effective if followed up by a telephone inquiry to confirm an appointment time.

- Introduce yourself using a personal referral. If possible, have a mutual acquaintance or The Career Center as the bridge for your contact. (e.g., "I'm Jessica Long, a sophomore at FSU. I found your name in The FSU Career Center's Seminole Connection database).

- Explain your request to schedule an appointment for gathering information about their field of work. If questioned, indicate clearly that you are not applying for a job at this time, but merely conducting career research to help you make better decisions. If the person you are trying to reach is not in, you can leave a message or ask when would be a good time to call back.

- Try to schedule a 20-30 minute appointment, to be conducted by phone or in person at their convenience. If the present time is too busy for the person you contact, ask when would be a better time or ask if he/she can suggest another contact in the organization that could provide you with helpful information.

- If your intent is to speak with the individual in person (which is optimal), try to avoid letting your phone call to schedule the appointment turn into the actual interview. However, sometimes the person might say over the phone: "I have some time now ... what did you want to ask me?" You should be prepared to conduct the interview over the phone if the person gives you an opportunity to do so. If you are able to schedule an on-site visit, remember to ask for directions and parking information.

What do I do during the interview?

- Do not exceed your requested time, but be prepared to stay longer in case the contact indicates a willingness to talk longer.

- Dress as if it were an actual job interview. First impressions are always important.

- Get to your appointment a few minutes early and be courteous to everyone that you meet — secretary, receptionist, etc.

- Take the initiative in conducting the interview. You ask the questions, you interview the person. Ask open-ended questions which promote a discussion and cannot be answered with one word responses.

- Once inside the organization, look around. What kind of working environment is there — dress style, communication patterns, sense of humor, etc? Is this a place you would want to work?

What should I do afterwards?

- Evaluate your experience. How did you manage in scheduling and conducting the information interview? How well did you prepare? Did you get the information you sought? What information do you still lack? Do you need to interview more people in order to get more than one biased viewpoint or additional information? What do you need to do next?

- Follow-up with a thank-you note, thanking your contact for his/her time and interest. You may want to include your conclusions/decisions resulting from the interview, and decide to follow-up now or later with a resume and an application letter or form. Record the information that you obtained: names, comments, and new referrals for future reference, and make appointments to interview the referrals.

Summary

- After doing several information interviews you will be more informed. You will be able to make better decisions which are based on accurate, current information.

- If you were trying to choose a major, you now are more familiar with various career paths a major might lead to. You also may have learned numerous methods to prepare for a particular occupation, not only through academic majors, but also work experience and college activities.

- If you were trying to choose an occupation, you now are more aware of position titles, job descriptions and qualifications, types of employers, the skills needed, as well as the interests and values expressed in several occupations.

- If you were preparing for a job hunt, you now are more familiar with potential employer contacts and the hiring process. You have developed your interviewing skills and received feedback on your resume and job hunting strategies. You have also demonstrated assertive job hunting behaviors by selecting, scheduling, participating in, and following through interview appointments.

Other Resources and Services

After completing an information interview, the following resources and services may be useful:

- To learn about additional resources and services for exploring occupations, see the resource guides on "Learning about Occupations." You may also find it helpful to read the following information handouts: "Locating and Using Career Information," and "Making Career Decisions."

- To learn about education and training that may be needed for this occupation, see the resource guides on "Deciding about Education" and "Choosing a Training Program." It might also be useful to read information handouts on, "Choosing a vocational/technical school, community college, colleges, or university," "Choosing a Graduate School," or "Developing a Job Search Campaign."

- Other resources and services that might be helpful are available on our Web site at http://www.career.fsu.edu/.

CHAPTER 8
CIP THEORY-BASED MEASURES OF READINESS FOR CAREER CHOICE

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This chapter describes the development and use of three CIP theory-based measures of readiness for career choice: the Career Thoughts Inventory (CTI; Sampson et al., 1996a; 1996b; 1996c), the Career State Inventory (Leierer et al., 2022), and the Decision Space Worksheet

(DSW; Peterson et al., 2010; 2016). Emerging CIP theory-based instruments are also briefly presented, such as the CASVE-CQ and the CSS. How to use readiness assessment measures in evidence-based practice will be addressed, as well as how to combine data from diagnostic interviews and measures. After reviewing this chapter, the reader should understand how CIP theory-based readiness measures can be used as screening measures to support clients in their career decision-making and problem-solving process. Readers can review information on CIP theory-based measures at https://career.fsu.edu/tech-center/topics/career-theory-research-and-practice/cognitive-information-processing-cip-theory-based-approach. After describing the design and use of the CTI, CSI, DSW, CASVE-CQ, and CSS, the chapter continues with a discussion of using assessment measures in evidence-based practice and the combination of data from diagnostic interviews and diagnostic measures. The chapter concludes with a summary and recommendations for getting the most benefit from reading the chapter.

Career Thoughts Inventory[44]

Background of the CTI

The Career Thoughts Inventory (Sampson et al., 1996a; 1996b; 1996c; 1998; Sargent & Lenz, 2017-2018) is a theory-based assessment and intervention resource intended to improve the quality both of career decisions made by adults, college students, and high school students and of career services delivered to these individuals. The CTI is a self-administered, objectively scored measure of dysfunctional thoughts in career problem solving and decision-making. The CTI and *Improving Your Career Thoughts: A Workbook for the Career Thoughts Inventory* (the CTI Workbook) (Sampson et al., 1996b) are based on *cognitive information processing* (CIP) theory (Peterson et al., 1991; 1996; 2002; Sampson et al., 2004; 2020) and a *cognitive therapy* theoretical approach to mental health and mental health services (Beck, 1976; Beck et al., 1979; Beck et al., 1985).

The CTI was developed to integrate the functions of assessment and intervention within a career service delivery context. The goal was to link the measure and the accompanying workbook in such a way that clients might make more efficient use of their time and the practitioner's time, while more effectively incorporating the assessment concepts into intervention strategies for change. As a result, the CTI comprises traditional assessment components (CTI Test Booklet and Professional Manual) plus a learning resource (the *CTI Workbook*).

Cognitive information processing theory postulates that effective career problem solving and decision-making require the processing of information in the following four domains: (a) self-knowledge; (b) options knowledge; (c) decision-making skills (communication, analysis, synthesis, valuing, and execution); and (d) executive processing (Peterson et al., 1991, 1996, 2002; Sampson et al., 2004; 2020). To simplify the process of instrument development, the above domains and subcomponents were organized into eight cognitive information processing (CIP) content dimensions that include the following:

1. Self-knowledge
2. Options knowledge

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[44] Content in this section was used or adapted from Sampson et al., 2004. Used or adapted with permission.

3. Communication

4. Analysis

5. Synthesis

6. Valuing

7. Execution

8. Executive processing

Negative or dysfunctional thinking in any of the CIP content dimensions could impair an individual's ability to solve career problems and make career decisions. For the purposes of this instrument, the terms "*thinking*" and "*information processing*" are used synonymously.

Cognitive therapy theoretical concepts (Beck, 1976; Beck et al., 1979, 1985) specify that dysfunctional cognitions have a detrimental impact on behavior and emotions. Through cognitive restructuring, collaborative empiricism, attention to emotions, and the development of an effective helping relationship, clients can learn to replace dysfunctional cognitions with more functional cognitions, resulting in positive changes in behavior and emotions.

In developing the CTI, the authors made the following assumption: Although dysfunctional thinking in career problem solving and decision-making cannot be measured directly, it can be inferred from an individual's endorsement of statements (test items) reflecting a variety of negative career thoughts. For the purposes of this instrument, *career thoughts* are defined as outcomes of one's thinking about assumptions, attitudes, behaviors, beliefs, feelings, plans, and/or strategies related to career problem solving and decision-making. Regardless of whether CTI items refer to assumptions, attitudes, behaviors, beliefs, feelings, plans, and/or strategies, all items reflect negative thinking that inhibits effective career problem solving and decision-making.

Use of Terminology

Although some publications, including the *CTI Professional Manual,* use the term *dysfunctional* career thoughts, all client materials use the term *negative* career thoughts. It is strongly recommended that practitioners using the *CTI Workbook* with clients use the term negative rather than dysfunctional when referring to thoughts or thinking that limit career problem solving and decision-making.

Use of the CTI and the CTI Workbook

In service delivery, the CTI can be used by practitioners to help adults, college students, and high school students identify, challenge, and subsequently alter negative career thoughts that impair their ability to effectively solve career problems and make career decisions. Specifically, the CTI can be used as an instrument for *screening* and *needs assessment*, as well as a *learning* resource in delivering career services. The *CTI Professional Manual* (Sampson et al., 1996c) provides additional details on the use of the CTI and *CTI Workbook*, including specific strategies for individual counseling, group counseling, brief counseling, workshops, and curricular interventions.

Screening

As a screening measure, the CTI can be used to identify individuals who are likely to encounter difficulties in making career choices as a result of their negative thinking. Individuals identified as having a number of dysfunctional thoughts will likely have lower readiness for career choice and require more assistance in making effective use of career services, whereas individuals identified with fewer dysfunctional thoughts will likely have higher readiness for career choice and require less assistance. The practitioner can use the *CTI Workbook* to facilitate an individual's understanding of how much help they will likely need to make effective use of career interventions.

The CTI Total score is a single global indicator of dysfunctional thinking in career problem solving and decision-making. Lower CTI Total scores tend to reflect limited dysfunctional career thinking and are best interpreted at the item level. Higher CTI Total scores tend to reflect greater dysfunctional career thinking and the emergence of specific issues that can be interpreted at both scale and item levels.

By comparing the individual's CTI Total score with normative data, it is possible to determine if the individual's level of dysfunctional thoughts is greater than or less than those of a normally distributed group of adults, college students, or high school students. Organizations or individual practitioners are strongly encouraged to develop local CTI norms to allow more population-specific comparisons, provided expertise is available in calculating norms.

The convergent validity evidence presented in the *CTI Professional Manual* can be used as a starting point for developing interpretive hypotheses. For *all groups*, the CTI Total score was inversely correlated with vocational identity, certainty, knowledge about occupations and training, and positively correlated with indecision, neuroticism, and vulnerability.

In addition to these correlates, adults with high CTI Total scores tend to have a greater need for information, be less decided, perceive more barriers to choice, and be more anxious. College students with high CTI Total scores tend to be less decisive and more depressed. High school students with high CTI Total scores tend to lack self-clarity.

Any hypothesis about the specific nature of any of the described characteristics for an individual, based on CTI scores, should be considered tentative until verified by interviewing the client (or having the individual complete other diagnostic measures plus an interview). Section 1 of the *CTI Workbook* can be used to aid interpretation of the CTI Total score. The *CTI Professional Manual* includes specific recommendations for selecting a level of service delivery intervention based on the CTI Total score.

Needs Assessment

As a needs assessment measure, the CTI can be used to identify the specific nature of dysfunctional thinking noted in the screening process. In problem-solving terms, the CTI helps define the problem space (Leierer et al., 2022). Practitioners can then recommend career interventions to reduce career choice problems. Using the *CTI Workbook* can also facilitate an individual's understanding of the nature of their dysfunctional thoughts. Construct scales include Decision-Making Confusion, Commitment Anxiety, and External Conflict.

- The *Decision-Making Confusion* (DMC) scale reflects an individual's inability to initiate or sustain the decision-making process as a result of disabling emotions and/or a lack of understanding about the decision-making process itself.

- The *Commitment Anxiety* (CA) scale reflects an individual's inability to make a commitment to a specific career choice, accompanied by generalized anxiety about the outcome of the decision-making process. This anxiety perpetuates indecision.

- The *External Conflict* (EC) scale reflects an individual's inability to balance the importance of self-perceptions with the importance of input from significant others, resulting in a reluctance to assume responsibility for decision-making.

As with the CTI Total score, comparisons of construct scale scores can be made with a normally distributed group of adults, college students, or high school students. Again, organizations are strongly encouraged to develop local CTI norms to allow more specific population comparisons.

Learning

As a learning resource, the CTI and the *CTI Workbook* can be used with various counseling interventions in assisting individuals to challenge and alter the specific dysfunctional thoughts identified as problematic in the prior needs assessment process. The primary cognitive restructuring schema (Beck et al., 1979) used throughout the workbook encourages individuals to *identify*, *challenge*, and *alter* any negative career thoughts and then follow up with *action*. This schema is repeated at several key points in the workbook to reinforce client understanding of the cognitive restructuring process. By reducing dysfunctional career thinking, clients are more likely to effectively process information needed for career problem solving and decision-making. By becoming more aware of the negative impact of dysfunctional thinking and by learning the process of cognitive restructuring, clients can become "freed up" to think in more-creative, reality-based ways about their career choices. A theory-based, decision-making checklist, included in the *CTI Workbook*, can indicate potentially useful areas for specific instruction in career decision-making. The CTI and the *CTI Workbook* are designed to help clients make current career decisions as well as learn how to be better problem solvers in the future. The *CTI Workbook* includes the following five sections.

Section 1 - Identifying Your Total Amount of Negative Career Thoughts: The CTI Total Score. The first section is designed to help clients understand that as negative career thinking increases, the level of practitioner assistance necessary for clients to benefit from career interventions increases as well. The intended outcome of using this section is that clients will be more motivated to seek a level of service appropriate for their needs.

Section 2 - Identifying the Nature of Your Negative Career Thoughts. The second section is designed to help clients gain insight into the development and maintenance of their dysfunctional thinking. The intended outcome of using this section is that clients will be more self-aware, more capable of monitoring and controlling cognitions, and more motivated to cognitively restructure negative career thoughts and take action to make career decisions.

Section 3 - Challenging and Altering Your Negative Career Thoughts and Taking Action. The third section is designed to: (a) improve self-awareness of the detrimental impact of dysfunctional thinking on career problem solving and decision-making, (b) improve client

capacity to monitor and control negative self-talk, (c) facilitate the cognitive restructuring of negative career thoughts through completion of an exercise, and (d) facilitate the development of an Individual Action Plan (IAP) for using career resources and services. The intended outcome of using this section is that clients will reduce their dysfunctional career thinking and more effectively use career resources and services, ultimately leading to a more consistent reduction of dysfunctional thoughts and more appropriate career decisions.

Section 4 - Improving Your Ability to Make Good Decisions. The fourth section is designed to enhance the present and future decision-making skills of clients through decision-making instruction. The intended outcome of using this section is that clients will be better able to assess and apply their skills in career problem solving and decision-making.

Section 5 - Making Good Use of Support from Other People. The fifth section is designed to help clients better understand how support resources can be used to their benefit in cognitive restructuring, career exploration, and decision-making. The intended outcome of using this section is that clients will be more proactive, knowledgeable consumers in making effective use of available practitioners and significant others.

Appropriate Populations for the CTI

The CTI is designed for the following individuals: (a) 11th- and 12th-grade high school students who may be choosing a postsecondary field of study, choosing an occupation, or seeking employment; (b) college students who may be choosing a major field of study, choosing an occupation, or seeking employment; and (c) adults who are considering an occupational or employment change, seeking employment due to unemployment or underemployment, or reentering the labor market after a substantial period of unpaid work (such as child-rearing or engagement in extended education). Research with the CTI has included adults (Austin et al., 2004), American college students (e.g., Bertoch et al., 2014), first-generation college students (e.g., Freeman, 2017), clients seeking career assistance (Dieringer, et al., 2017) adolescents (Bjornsdottir, 2018; Bobridge et al., 2003), unemployed adults (Bullock-Yowell et al., 2014), veterans (Buzzetta et al., 2017), and offenders (Musgrove et al., 2012), among others. See the CIP bibliography for additional populations involved in CTI research.

Using the Harris-Jacobson Wide Range Readability Formula (Harris & Jacobson, 1982), the readability of the CTI and the *CTI Workbook* was calculated to be at a 6.4 and 7.7 grade level, respectively. Thus, the CTI and *CTI Workbook* can be used without assistance with most high school and college students and adults.

Integrating the CTI into Service Delivery

In Chapter 7, the CTI was identified as one of the assessment resources for comprehensive screening in the differentiated service delivery model. A minimum of a brief interview with the client is also included in comprehensive screening. The CTI is also potentially useful in further understanding the individual's career readiness, negative career thoughts, and can be utilized to create an individual learning plan (ILP), which was also described in Chapter 7. A career advisor might utilize the *CTI Workbook* to identify negative thoughts to assist the client in beginning to reframe their thoughts. An ILP item might simply be asking the client to listen for words such as "never, always, can't" so they begin to hear these statements, whereas another client might be ready to reframe their thought and an ILP item might be to practice reframing thoughts as they come to mind. The ILP provides a structured format to identify

concrete next steps and allows the client to keep moving forward and prevent them from feeling stuck in their career decision-making.

Administering, Scoring and Interpreting the CTI

To facilitate quick completion, scoring, and profiling of the instrument and avoid unnecessary delays or disruptions in the service delivery process, the CTI combines the inventory, answer sheet, and profile form into one booklet. The Test Booklet can be quickly scored by clients, practitioners, or clerical support staff (Sampson et al., 1996c).

To administer the CTI, the practitioner should review the purpose for having the client take the CTI. In most cases, that purpose is to obtain a better sense of the thoughts, feelings, and concerns that might be complicating the person's ability to effectively engage in the career decision-making and problem-solving process. The practitioner might also share how the results will be used, e.g., to get an overall sense of what they are thinking about their career, and to also look at specific concerns listed on the CTI. The practitioner can have the client read each statement aloud or silently and choose the response that most accurately represents their level of agreement. If between two responses (e.g., strongly agree and agree), the client should be directed to select the stronger response (e.g., in the case above, strongly agree). A benefit to having a client read aloud, and to give voice to anything that comes to mind as they are reading, is that this process can provide additional context about the specific thought or other thoughts.

An electronic version of the *CTI Workbook* has also been piloted for remote use with clients. The print version was adapted to an editable PDF and initial pilot testing has shown that this new version of the workbook worked well for both staff training and client interventions. The PDF version is password protected, and it is easy to enter reframed statements and share tailored information with clients. The *CTI Workbook* provides an important supplement as it shares essential metaphors and activities to assist clients as they identify and reframe negative thoughts that are preventing them from making informed career decisions.

Once an individual completes the CTI, the top layer of the instrument can be pulled away from the bottom layer that reveals the scoring instructions for the total score and subscales (Sampson et al., 1996c). Recent research (Hayden & Osborn, 2020) has also found that combining the more emotion-laden items such as "I get so anxious…" results in a strong (alpha reliability = .89) scale. Specifically, this includes 11 items (i.e., Items 3, 8, 11, 19, 21, 27, 32, 33, 35, 43, and 47) and was strongly associated with general worry (Hayden & Osborn, 2020). The CTI Profile is printed on the back page of the booklet.

To interpret the CTI, the practitioner might start with asking the client their overall reactions to taking the CTI, including thoughts and feelings that emerged as they were completing the inventory. The practitioner can then reiterate the original purpose for taking the CTI, tying that into the individual's career concern. For example, "Carlos, when we were talking earlier, you said that you felt like you should be able to make this career decision on your own and couldn't figure out why you kept getting stuck. Perhaps we can see some of those reasons as we look at your responses on the CTI." The practitioner might then start with the CTI profiles and placing their scores within context of the norm group. For example, "Your overall score shows that you are very similar/higher/lower to others," and then look at the three subscales and interpret similarly. Briefly reminding the person of what each scale measures would be appropriate prior to reviewing their results. The practitioner might also ask the client about the

degree to which they are experiencing those constructs (i.e., decision making confusion, commitment anxiety, external conflict) as an internal validity check, and ask follow-up questions about that. For example, if a person states that they believe they are experiencing a great deal of external conflict, the practitioner might examine those specific items and ask the client what person(s) in their life are associated with those items, and how, as well as strategies the person has used to manage that conflict. The *CTI Workbook* (Sampson et al., 1996b) provides language that can be used in phrasing interpretive statements to clients. We mentioned earlier the emotional-laden items in the CTI. There is not a scoring sheet for these items, but a practitioner can either examine them separately or scan the items that have words like "anxiety" or "depression" in them and see how the individual rated those to gain a sense of how the negative thoughts are impacting the person emotionally, and to possibly check about other mental health concerns. See more information in Chapter 10 regarding the relationship between higher levels of negative thinking and mental health concerns.

Once the overall interpretation of the total and subscales occurs, the practitioner might open the assessment and look for high responses on individual items and ask the client to share more about those. The practitioner could ask the client to identify which item in a specific column or on the entire instrument was the most impactful, and to provide more details. The practitioner could also ask the client to read a highly scored item out loud and then reflect on how they feel hearing themselves read that thought, and how they think thoughts like that might impact their motivation to work on their career concern. Multiple negative thoughts might lead to the suggestion of using the *CTI Workbook*, while fewer items might be able to be addressed with challenges such as, "Is it always the case that?" or cognitive restructuring, such as, "Might it be more helpful to say…?"

Diversity Issues

Consideration of diversity issues is important in the effective use of the CTI and the *CTI Workbook*. The influence of identities in which an individual holds or lacks power or privilege such as age, disability, ethnicity, first generation status, gender identity, geographic location, immigration status, indigenous background, nationality, race, religion, sexual orientation, sex assigned at birth, socioeconomic status, and others on career thoughts can be an important complexity dimension in readiness for career choice. Membership in certain identity-based groups may enhance career choice via networking and mentoring, or it may constrain career choice via stereotyping and discrimination. The specific nature and consequences of these environmental factors on career choice will likely vary with group membership. As a result, the specific career thoughts of an individual are a product of individual experience, mediated by personal identities and by group membership.

It is difficult to develop an instrument that reflects differences in life experience between group cultures, and within subcultures of specific groups, that is brief enough to be hand-scored for use as a screening tool in service delivery. The CTI was designed to specifically measure negative career thoughts that tend to be common across groups. During development of the CTI, items that might be significantly associated with gender or ethnicity were eliminated from the item pool. It can be helpful, however, to collaboratively use the CTI with the client to identify, challenge, and alter career thoughts of an individual from a specific group. The *CTI Professional Manual* (Sampson rt al., 1996c) includes specific suggestions for dealing with diversity issues in interpreting the CTI and using the *CTI Workbook*.

Professional Requirements

A variety of practitioners may make effective use of the CTI and the *CTI Workbook*. In addition to general training in human behavior, helping skills, and assessment, practitioners need training in career development, career service delivery, and cognitive-behavior therapy. Practitioners need general experience in the delivery of human services and in the delivery of career services with appropriate supervision. In particular, practitioners using the CTI with clients should be familiar with the *Professional Manual*, personally complete all components of the CTI, and make use of appropriate supervision. They should also explore their own dysfunctional career thoughts in counseling or supervision.

Development of the CTI and the CTI Workbook

This section describes the development of the CTI and the *CTI Workbook* and provides a foundation for understanding how to use the CTI and the *CTI Workbook*.

CTI Item Selection and Scale Construction

The authors used a rational-empirical approach in developing the CTI. After reviewing the theoretical foundations of the CTI and the literature on dysfunctional thinking in career choice, they developed criteria for each of the eight CIP content dimensions. An initial pool of 248 items was then created based on actual client statements from the authors' career counseling experience. After experienced career counselors reviewed the items for clarity and realism, the pool was revised to 195 items and then reviewed by a six-member bias panel to identify and correct any bias related to ethnicity (African American, Hispanic American, Asian American), gender, disability, and age. The 195-item pool plus 13 randomly inserted items from the short form of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982) was administered to 320 volunteer undergraduate students. Eighty items were retained based on their general psychometric quality; freedom from gender, ethnic, or social desirability bias; item-scale reliability; and content domain coverage. A new sample of 196 volunteer undergraduate students completed this 80-item form. A principal components analysis with Varimax rotation revealed three interpretable constructs that were associated with dysfunctional career thinking: *decision-making confusion* (DMC), *commitment anxiety* (CA), and *external conflict* (EC). Items could then be identified as relating to one of these three constructs as well as contributing to one of the eight CIP content dimensions. The 80 items were also administered to clients seeking services, allowing an analysis of the capacity of individual items to distinguish clients ($n = 68$) from nonclients ($n = 196$). The authors then derived a shortened 48-item version of the CTI on the basis of factor loadings, contribution to scale separation, capacity to discriminate clients from nonclients, and content domain coverage. The 48 items were then administered to a new sample of 145 volunteer undergraduate students. A second principal components analysis with Varimax rotation revealed the same three interpretable constructs noted earlier. Refer to the *CTI Professional Manual* (Sampson et al., 1996c) for additional details on the development, standardization, and validation of the CTI. Further information on the CTI's development may be found in Sampson et al. (1998).

CTI Workbook Development and Pilot Testing

The *CTI Workbook* development began with the cognitive restructuring exercise in Section 3. To assist clients in challenging and altering their thoughts, reframing stimulus

statements were written for each CTI item to show clients how negative thoughts interfere with their ability to make career decisions and to provide information on making the best use of time spent on career decision making. (Refer to the sample reframing stimulus statements found in Table 8.1.) Reframing stimulus statements include varying combinations of the following themes:

1. The difficulty often encountered by individuals making career choices.

2. The often inherent ambiguities in making career choices.

3. The importance of assuming personal responsibility for decision-making while also considering input from significant others.

4. The importance of linking career choices with other life choices.

5. The identification of factors that make it more difficult to think clearly about career options.

6. The identification of absolute dichotomous thinking that interferes with career choice.

7. The assumption that improved decision-making and information-seeking skills can be learned.

8. The value of broad career exploration prior to final choice.

9. The value of using a variety of sources of information in career exploration.

10. The value of obtaining assistance from a helping professional when individuals experience difficulty in career choice.

The reframing stimulus statements were then examined for potential bias regarding ethnicity, gender, disability, and age. The exercise was pilot-tested and subsequently revised for clarity. The authors then added interpretive and decision-making instruction sections to the workbook.

Table 8.1

A Sample of CTI Items and Reframing Stimulus Statements

If CTI items are endorsed by individuals as "Strongly Agree" or "Agree," it may be useful to help them challenge and alter their negative career thoughts. Some key words that make thoughts more negative and harmful are in *italics*. Reframing stimulus statements are provided to suggest potentially more effective ways of thinking to improve career problem solving and decision-making.

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1. *No* field of study or occupation interests me.

It's possible that you haven't determined what your likes and dislikes are. You may need more life experience to really understand your interests. You can get more life experience from full-time or part-time jobs, volunteer work, or leisure activities.

2. Almost all occupational information is slanted toward making the occupation look good.

While it is certainly true that some kinds of occupational information are designed to make the occupation "look good," it is likely an overstatement to say this about all information. Occupational information may be biased in both directions, good or bad. Helping professionals, like librarians or counselors, can help you determine the quality of various sources of information. It's important to evaluate the source and purpose of each piece of information and determine its usefulness in your career decision-making.

3. I get so depressed about choosing a field of study or occupation that I *can't* get started.

While it is important to admit that you are feeling depressed about making a career choice, doing nothing about your problem is not a good idea in the long run. You may need to get help for your feelings of depression, or take small concrete steps toward getting the information you need to begin the decision-making process. Such steps might include talking with people in different occupations, reading about occupations, or seeking career assistance to help you develop a plan for taking the next step.

4. I'll *never* understand myself well enough to make a good career choice.

It is important to be aware of your values, interests, and skills as you make career decisions. Thinking that you must have total understanding of yourself before you can make a good career choice may make you feel discouraged and less likely to think carefully about your options. Going through the career choice process will actually help you better understand yourself. There are resources, including print materials and helping professionals, that can assist you in gathering enough information about yourself to at least take the next step in the career decision-making process.

5. I *can't* think of any fields of study or occupations that would suit me.

Right now you may feel discouraged, and that may cause you to cut yourself off from developing and exploring suitable possibilities. If you think, instead, that it is possible to identify appropriate options, you may free yourself up to explore and discover suitable fields of study or occupations.

6. The views of important people in my life interfere with choosing a field of study or occupation.

The differing views of important people in your life can easily complicate your choice of a field of study or an occupation. Some of the information you may get from important people in your life may be useful, while other input makes you more confused or uncertain.

However, no matter what suggestions you get from others, you are ultimately the person who is responsible for and capable of making your career choice.

7. I know what I want to do, but I *can't* develop a plan for getting there.

In knowing what you want to do, you have already made good progress toward completing your career plans. The fact that you are unclear about your next step shows you that you need to find information on career planning, or you need to find a competent person to help you develop a plan, so you can reach your goals.

8. I get so anxious when I have to make decisions that I can hardly think.

Many people feel anxious when making important decisions. Anxiety does make it harder to think clearly. However, avoiding decision-making or depending on others to make decisions for you is not a good idea. With help from a competent person, you can get the information you need and learn how to make a good career decision.

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Standardization

The authors collected CTI normative data for adults (n = 571), college students (n = 595), and 11th- and 12th-grade high school students (n = 396), as well as combined data on college student and adult clients (n = 376). In general, all groups were representative in terms of geographic distribution, gender, and ethnicity, with the exception that female adults were overrepresented and Hispanic American adults were underrepresented. As stated previously, organizations and individuals are strongly encouraged to develop local CTI norms to allow more population-specific comparisons, provided expertise is available in calculating norms. Analysis of normative data revealed that gender and ethnicity accounted for 0.2% and 0.1% of the variance, respectively, in CTI Total scores for all groups combined. Therefore, the authors concluded that there is little relationship between gender or ethnicity with respect to CTI Total scores and that there is no need to provide separate norms for either of these factors.

Reliability

The following section describes the reliability of the CTI in terms of internal consistency (alpha) and stability (test-retest) for various populations.

The internal consistency of the CTI Total score and construct scales was determined by calculating coefficient alphas for each of the respective norm groups. The internal consistency (alpha) coefficients for the CTI Total score ranged from .97 to .93. Alpha coefficients for the construct scales ranged from .94 to .74 (Sampson et al., 1996c).

Stability concerns the extent to which individuals achieve the same CTI scores on two different occasions. The stability of the CTI Total score and construct scales was determined by having 73 volunteer college students and 48 volunteer 11th- and 12th-grade high school students complete the CTI twice over a four-week interval. Four-week test-retest stability coefficients for the CTI Total score were high (r = .86) for the college student sample, indicating little change in responses to the entire 48 items over the four-week period. The stability coefficients for the construct scales ranged from .82 to .74, following a similar pattern as the data for internal

consistency, with lower correlations for scales with fewer items. This pattern was also observed for the high school student sample, with the CTI Total at r = .69 and the construct scales ranging from .72 to .52, showing that adequate stability exists for the use of the instrument.

The purpose of this section is to share findings about the CTI's internal consistency when administered across various populations, such as high school students, college students, employed and unemployed adults, veterans, people with disabilities, and others. Though the reliability of the CTI has been established in different settings and populations, most studies involve college undergraduates (e.g., Chason, 2012; Lee et al., 2016; Miller et al., 2019; Osborn et al., 2020). See the CIP bibliography for more examples of research involving the CTI with varied populations.

Researchers studying the relationship between career planning courses and negative career thoughts frequently have asked students to complete the CTI two or three times during a course (e.g., Chason, 2012; Dozier et al., 2022; Miller, 2018; Miller et al., 2019; Osborn et al., 2007; Reed, 2005). Some have used this pretest-posttest design with particular subgroups within career courses, such as students engaged in STEM programs (e.g., Belser et al., 2018; Prescod et al., 2018). Others have incorporated the CTI into a manual used in a multi-session career decision-making training for undergraduates (e.g., Leuty et al., 2014) and for underprepared college students (e.g., Henderson, 2009).

Though the CTI has often been administered (sometimes with other research inventories) repeatedly throughout a semester (Acrement, 2013; Chidick, 2018; Galles et al., 2019; Lustig & Xu, 2018; Lustig et al., 2016; Strauser et al., 2004), it sometimes has been given only at the start of a career planning course. In this case, the CTI cannot be used to evaluate the efficacy of the course, but it can reveal helpful information about the students (e.g., Bertoch, 2010; Coleman et al., 2023; Hartley, 2010). When administered on the first day of a career planning course, the CTI can enable instructors to better understand their students and enable researchers to pinpoint variables of interest in the data (e.g., Bertoch, 2010; Bullock-Yowell et al., 2015; Coleman et al., 2023; Hartley, 2010). In a set of more than 20 CTI studies of students enrolled in career planning courses, the internal consistency of the CTI-Total score and the Decision-Making Confusion, Commitment Anxiety, and External Conflict construct scale scores ranged from .67 to .97.

Non-experimental CTI studies with college students not enrolled in a career planning course also have been conducted, providing data on the career thinking of other subpopulations of university students (Acrement, 2013; Heller, 2008; Lustig et al., 2016). Some researchers, for example, gathered CTI data on non-career-course students in order to examine the relationship between negative career thoughts and a specific mental health issue (Buzzetta, 2016; Buzzetta et al., 2020; Chadick, 2018; Dagenhart, 2005; Dieringer et al., 2017). This wide variety of CTI studies, both of students enrolled and not enrolled in a career planning course, have confirmed previous findings about the internal consistency of the CTI. Moreover, they have expanded the potential utility of the CTI for understudied and underserved populations.

Researchers have employed various means to recruit students outside of career planning courses to take the CTI. College or department pools of student volunteers are one source (e.g., Bullock-Yowell, et al., 2011; Freeman, 2017; Sides, 2021), while classes in which the instructor requests student participation is another (Arcement, 2013; Lustig et al., 2016; Strauser et al., 2006). Purposive sampling approaches also have been used successfully. In some cases, researchers administered the CTI to a large, diverse group of students, then used the data

associated only with students who have one or more characteristics of interest. Another method involved recruiting participants who represented a unique subpopulation by reaching out to particular student organizations to which they belonged (see Hou, 2018).

Over the last 20 years, CTI studies of non-career-course students have surveyed student-athletes (e.g., Heller, 2008; Sides, 2021), international students (e.g., Hou, 2018; Lee et al., 2003), students with learning disabilities (e.g., Dipeolu et al., 2002), African-American college students (e.g., Bullock-Yowell et al., 2011; Fowler, 2012), and first-generation college students (e.g., Fowler, 2010; Freeman, 2017). Across these studies, the internal consistency of the CTI-Total score and the Decision-Making Confusion, Commitment Anxiety, and External Conflict construct scale scores ranged from .78 to .98.

Because all the studies described above have focused on college students, one might wonder if the CTI also has reliability and validity for populations of non-college students, such as typical adults, international adults, persons with disabilities, high school students, and incarcerated individuals. In fact, several such studies have been conducted. Horne (2010), for example, used the CTI to look at the career thoughts of individuals on a film crew. In this case, the Cronbach alpha reliabilities were found to be good or excellent (Total =.98, DMC = .95, CA = .93. EC = .80). Similarly, Bullock-Yowell et al., 2009) found acceptable to excellent internal consistencies for both the experimental and control groups of unemployed workers on three of four CTI scales. The findings for the control and experimental groups, respectively, were Total = .95, .93, DMC= 87, .93, and CA = .84, .89, while the EC score (.69, .73) warranted more caution. In another study of unemployed war veteran workers in which the CTI-Total score was used as a dependent measure, the Cronbach alpha was .90 (Bullock, et al., 2009).

The effects of employment and job-seeking activities on substance abuse reduction also has been of interest (e.g., Atherton, 2011; Kim, 2013; Stevenson et al., 2021). Slatten (1999) cited the work of Sampson et al. (1996**)** regarding the reliabilities of the three CTI construct scales and the Total score, and concluded that the CTI had enough internal consistency to support the study findings. Moreover, Slatten's research (1999) demonstrated that the CTI may be a valuable tool for assessing the negative career thoughts of individuals who require intensive, structured care for substance abuse problems, that is, individuals for whom substance abuse is their primary disability.

In regard to persons with disabilities, several studies by Dipeolu and colleagues have examined the reliabilities of the CTI for two distinct groups of high school students, those with and without a learning disability (LD) or attention deficit hyperactivity disorder (ADHD) condition. In this case, the reliabilities for the scales were: Total =.94 to .96, DMC = .86 to .93, CA = 78 to .85; and EC = .69 to .77, suggesting that the CTI may be a useful tool for clinical and research work with both high school (Dipeolu et al., 2020; Dipeolu et al., 2012; Dipeolu et al., 2015) and college students (Dipeolu et al., 2002) with learning disabilities or ADHD. Lustig, Strauser, and colleagues found that the CTI was a useful measure for evaluating the career thoughts of individuals with Multiple Sclerosis (DMC = .94, CA = .89, EC = .79) (Lustig et al., 2018), as well as various types of disabilities (Lustig & Strauser, 2008; Yanchak et al., 2005). Among CTI tests of this latter population, the internal consistency of the CTI scales ranged from .69 to .96.

Two studies used the CTI with incarcerated men and women. In the first, Railey and Peterson (2000) collected CTI data from female offenders and female repeat offenders. However,

they did not report on the internal consistency of the CTI scales. In a study of male offenders and male repeat offenders, however, Meyer and Shippen (2016) computed the reliabilities for the Total score, and the DMC, CA, and EC scale scores, with results ranging from .75 to .93. Taken together, the findings of this and other studies described in this section show acceptable to excellent internal consistencies for all CTI scales and point to the potential usefulness of the CTI for a wide variety of individuals.

Validity

The following section describes the validity of the CTI in terms of content, factorial, convergent, and criterion validity.

Content Validity. Content validity concerns the congruence of CTI items, CIP content dimensions, and construct scales with the theoretical basis of the instrument. This congruence was built into the development strategy for the CTI items and scales. Individual items and construct scales are directly linked to CIP theory through content dimensions. CIP content dimensions (self-knowledge, options knowledge, communication, analysis, synthesis, valuing, execution, and executive processing) provided specific criteria for developing items. The *CTI Professional Manual* groups all 48 CTI items by content dimension and includes the corresponding criterion number or numbers for each (Sampson et al., 1996c).

Factorial Validity. Factorial validity is concerned with the extent to which clusters of empirically associated items that are conceptually consistent with the theory can be identified and reproduced across populations. Evidence of construct validity was established through a series of factor analyses. The constructs of decision-making confusion, commitment anxiety, and external conflict, which were identified in two different samples during CTI development, were replicated for adults, college students, and 11th- and 12th-grade high school students based on normative data. The CTI Total score is highly correlated (r = .89 to .94) with DMC for all groups. These correlations, along with the large percentage of the variance accounted for by DMC (factor 1), suggest that a general predisposition toward dysfunctional thinking strongly influences subsequent specific aspects of dysfunctional career thinking, such as commitment anxiety. External conflict (EC) appears somewhat less related to general dysfunctional thinking, as represented by the lower correlation of EC with the CTI Total score and DMC. Correlations among construct scales, especially CA and EC, are distinctly lower for the client population than for nonclient adults, college students, and high school students. CA and EC appear to be more distinct from DMC for clients than non-clients.

Given the magnitude of correlations among CTI factors observed for adults, college students, and high school students, a Principal Components Analysis with oblique rotation was used to extract the factor structure of the instrument. A three-factor model was confirmed for the college population, the combined normative sample, and the client comparison group. A two-factor solution (decision-making confusion and external conflict) was the most interpretable solution for the adult sample, whereas a different two-factor solution (decision-making confusion and commitment anxiety) was most interpretable for high school students. Our interpretation of these findings is that for adult, non-client populations who are almost all employed or not seeking employment, commitment anxiety is not an operative construct when a career problem does not exist, whereas confusion about decision-making and external conflict with significant others (such as spouses) are operative. For high school, non-client populations, external conflict with significant others (such as parents and caretakers) concerning career problems is not yet an

issue, whereas confusion about decision-making and anxiety about post-high school commitments yet to be made are operative. The three-factor solution, including decision-making confusion, commitment anxiety, and external conflict, was again reproduced for the client population, for which the CTI was designed. We concluded that the three-factor solution is the most appropriate model to use for the instrument, as it is the most generalizable solution across all populations.

What these analyses reveal about the CTI's construct validity is that there is a single powerful confusion entity that is pervasive in career problem solving and decision-making. Beyond this, there are more-specific issues related to one's anxiety about committing to a career choice and to potential conflict with significant others. Therefore, all three constructs may be viewed as indicators of the presence of dysfunctional thinking. This type of thinking constrains the cognitive system that undergirds career problem solving and decision-making. A confirmatory factor analysis completed by Horne (2010) provided evidence of an adequate fit for the confirmatory model, significant factor loading values, and theoretically appropriate correlations among the three CTI subscales. In another study, in which the factor structure of the CTI's three subscales was confirmed in a Finnish translation of the CTI, underscored the potential cross-cultural use of the CTI (Lerkkanen, 2002). In another study, the CTI's three subscales were confirmed in a sample from the United States, but not confirmed in a sample from South Korea (Lee et al., 2015).

Given that exploratory factor analysis (EFA) is a valuable heuristic strategy to model specification, Sampson, and colleagues (Sampson et al., 1996), began by conducting an EFA. Based on a principal components analysis with an oblimin rotation, the magnitude of factor eigenvalues, percentage of variance explained by each factor, and scree plot results, three factors were found to produce a parsimonious structural solution.

After the theoretical model structure was developed, researchers began using CFA to assess the CTI measurement model concerning fit as well as convergent and discriminant validity. Following guidelines discussed in pertinent articles related to structural equation modeling and assessing measurement models (Hair et al., 2010; Kline, 2015; Schreiber et al., 2006; Weston & Gore, 2006), a first-order CFA was conducted examining factorial validity of the CTI. CFA tests whether indicators load on specific latent variables as hypothesized in the a priori or prespecified model. In other words, using model goodness of fit indices (Weston & Gore, 2006), CFA examines how well the proposed factor model explains the observed pattern of correlations or covariances in different samples.

Eight CFA investigations have been conducted to provide evidence of the construct validity of the CTI in different populations (See Table 8.2). Some of these studies have investigated different types of populations, while other studies have investigated countries outside the United States (e.g., Korea). Lee and colleagues (Lee et al., 2016) examined the factor structure (using CFA) of the CTI using a sample from three different age groups (i.e., high school students, college students, and adults) in Korea and the United States.

The internal structural aspects of validity of the eight data sets were compared against the hypothesized (29-item) CTI 3-factor model using confirmatory factor analytic procedures. The CFA results for these models were compared against the adequacy guidelines of the goodness of fit index (GFI) or Tucker-Lewis Index (TLI) at least .90 (.95 and greater indicates excellent fit), root mean square error of approximation (RMSEA) of .07 or lower, and standardized root mean

square residual (SRMR) at most .08 (Kline, 2015). Compared against the guidelines as mentioned above [CFI or TLI ≥ .90 (.95 and greater indicates excellent fit), RMSEA ≤ .07, and SRMR ≤ .08; (Kline 2015), the CFI, TLI, RMSEA, and SRMR indexes indicated adequate fit of the studies using non-Korean participant data to develop the model. Table 8.2 shows results that the specified measurement model had an adequate fit with United States participants CTI data.

Table 8.2

Fit Indices for Individual Confirmatory Factor Analysis Based on the Three-Factor Solution in the Groups

	c^2	df	c^2 / df	p value	CFI	TLI	RMSEA	SRMR
United States (Lee et al 2016)								
HS students	679.77	374	1.82	<.001	.929	.923	.046	.052
College students	1,247.69	374	3.34	<.001	.900	.892	.063	.054
Adults	1,209.69	374	3.23	<.001	.918	.911	.063	.044
Korea (Lee et al 2016)								
HS students	2,615.42	374	6.99	<.001	.852	.839	.064	.057
College students	2,255.39	374	6.03	<.001	.860	.848	.062	.053
Adults	1,700.97	374	4.55	<.001	.860	.847	.059	.048
Horne (2012)	894.55	347	2.58	.001	.83		.10	.06
Hou (2018)	166.28	91	1.83	<.001	.97	.96	.06	

Note. c^2 = Chi-square; df = degrees of freedom; CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual.

Lee and colleagues examined whether the three-factor solution described fit the data for each of the three age groups (high school students, college students, and adults) in the two cultural samples. According to the results, as shown in Table 8.2, the three-factor model fits the data well for the U.S. participants. However, the fit indices were conflicted for the CFA of the Korean data sets. That is, three of the five fit indices did not meet the criteria for a good fit. The conclusion was that the three-factor model did not fit the Korean data sets.

Horne (2012) used the three-factor measurement model to examine CTI data from freelance crew members, and found global fit to be adequate. Similarly, Hou (2018) conducted confirmatory factor analyses for measurement components of the DMC, CA, EC, and Goal Instability Scale (GIS). The measurement model fit indices revealed an adequate fit of the items to the associated latent constructs.

In summary, exploratory factor analysis and confirmatory factor analysis are based on discovering the number of underlying factors for a set of items and estimating how strongly they relate to the factors. Both factor analysis methods provide evidence of the construct validity of the CTI.

Convergent Validity. Convergent validity concerns the extent to which the CTI Total score and construct scale scores correlate with other measures of similar constructs in a theoretically consistent direction. Convergent validity measures included the following:

- The identity scale and the occupational information and barriers categories from *My Vocational Situation* (Holland et al., 1980).

- The certainty and indecision scales from the *Career Decision Scale* (Osipow et al., 1987).

- The decidedness, comfort, self-clarity, knowledge about occupations and training, decisiveness, and career choice importance scales of the *Career Decision Profile* (Jones, 1988).

- The neuroticism domain (including the facets of anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability) from the *NEO PI-R* (Costa & McCrae, 1992).

Evidence of convergent validity was established by administering the above measures to 50 adults, 152 college students, and 151 high school students in the 11th and 12th grades. All samples were representative in terms of geographic distribution in the United States, gender, and ethnicity, with the exception that females slightly outnumbered males (56% to 44%) across all three groups, and Hispanic American adults were underrepresented.

Across all three groups (adults, college students, and high school students), CTI construct scale scores were consistently inversely correlated with positive constructs such as vocational identity, certainty, and knowledge about occupations and training, and directly correlated with indecision. The CTI Total score was consistently directly correlated with neuroticism and vulnerability. Only career choice importance exhibited inconsistency in relationships across groups, as was expected. Although CTI construct scale scores covaried directly with angry hostility, self-consciousness, and impulsiveness, the relatively low magnitude of the correlations has limited practical importance.

The following additional relationships were also noted. CTI scale scores for adults were consistently inversely correlated with comfort with choice, decidedness, and lack of information needs, and positively correlated with anxiety. CTI scale scores for college students were consistently inversely correlated with comfort with choice and decisiveness; the CTI Total score was positively correlated with depression. CTI scales for high school students were consistently inversely correlated with self-clarity.

Relationships between the CTI Total score and convergent variables were very similar to the relationships observed between DMC and the convergent variables. This is to be expected

given the high correlation between the CTI Total score and the DMC scale. The number of correlations having practical significance (.50 to .75) were 32 for adults, 21 for college students, and 17 for high school students. This is also to be expected given the slightly lower alpha reliabilities for high school students and college students in comparison with those for adults. These lower reliability coefficients, combined with the lower alpha reliabilities from some Career Decision Profile scales and small numbers of items in NEO facet scales, could explain the lower number of correlations between convergent variables and either CA or EC.

In subsequent research to that reported in the *CTI Professional Manual*, evidence of additional convergent and divergent validity has been established. For example, in one study (Saunders et al., 2000), the CTI Total score was significantly ($p < .05$) correlated with career indecision ($r = .78$), trait anxiety ($r = .42$), state anxiety ($r = .36$), and depression ($r = .37$). In another study (Osborn, 1998), the CTI construct scales were moderately ($\underline{rs} = .20\text{-}.40$) related to perfectionism, concern about mistakes, doubt about actions, and parental criticism. Lustig and Strauser (2002) found a moderate relationship between college students' sense of coherence and the CTI Total score and construct scales. "Individuals with a strong sense of coherence seemed to have less dysfunctional thoughts" (p. 8). Other studies demonstrated that the CTI scales were not related to either anger (Strausberger, 1998) or to interests (Wright et al., 2000). CTI total and subscale scores were also associated with worry, as well as negatively correlating with self-estimates of CIP components of making an effective career decision (i.e., self- knowledge, options knowledge, decision-making skills, and metacognitive skills; Hayden & Osborn, 2020). In terms of information processing, the CTI Decision Making Confusion scale scores were related to the extent to which individuals can fully engage printed occupational information (Hill & Peterson, 2001).

Criterion Validity. Criterion validity concerns the extent to which the CTI accurately discriminates between persons seeking career services (clients) and persons not seeking career services (nonclients). Evidence of predictive validity was established by administering the CTI to 199 clients and 149 non-clients at two different universities. Both samples were representative in terms of geographic distribution in the United States and ethnicity, with the exception that females slightly outnumbered males, a greater proportion of clients were sophomores, and a greater proportion of non-clients were seniors. Analysis of the data revealed significant differences in CTI Total and construct scale scores for each group, with clients having higher scores, as predicted. Post hoc CTI item-level comparisons revealed significant differences between clients and non-clients on 26 items, with clients scoring higher than nonclients on all 48 items. Subsequent research has also provided evidence of additional criterion validity has been established. The CTI scales were able to differentiate between female first-time offenders, probationers, and repeat offenders (Railey & Peterson, 2000), between persons with diagnosed learning disabilities and those without (Dipeolu et al., in press), and between persons classified in ego statuses as diffused, foreclosed, moratorium, and achieved (Voight, 1999). In conclusion, a growing body of research literature continues to support the psychometric properties of the CTI, as well as its application to a variety of populations.

Utility

The utility of a test concerns how well the test achieves its intended purpose within the constraints of "typical" practice. Many career service delivery organizations serve numerous clients. In this type of environment, an instrument used for screening, needs assessment, and

learning is most cost-effective when it meets the criteria of quick administration, rapid scoring, easily interpretation, easy integration into counseling homework, and inexpensive to use. The CTI was designed to meet these criteria.

1. Quick administration – most clients complete the 48 CTI items in 7 to 15 minutes.

2. Rapid scoring – the CTI can be hand-scored in 5 to 8 minutes. As a result, the CTI can be used as part of a brief intake procedure or during an initial session.

3. Easy interpretation – the CTI includes a limited number of scales (the CTI Total score and three construct scales), which simplifies interpretation. The *CTI Workbook* presents interpretive information for all four scales with text, metaphors, and illustrations that practitioners can use to facilitate interpretation of CTI results.

4. Easy integration – the *CTI Workbook* has several components that can be assigned as homework, such as cognitive restructuring of negative thoughts, developing an Individual Action Plan for using career resources and services, and learning about the decision-making process.

5. Inexpensive to use – the CTI Test Booklet and the *CTI Workbook* are relatively inexpensive to purchase, and the hand-scoring feature eliminates scoring processing fees.

The use of the CTI in practice is shown in three case studies of individuals with varying degrees of negative career thoughts, decidedness, and patterns of construct scores.

Case Studies

Three case studies with profiles used or adapted from the *CTI Professional Manual* (Sampson et al., 1996c) can help illustrate potential interpretations and implications for using the instrument in counseling, including screening, needs assessment, and learning.

Case Study 1: Kiya

Kiya, a 38-year-old female, is seeking assistance from a veteran affairs career center where services are offered to military veterans in the community. Kiya served two tours of duty in Afghanistan before taking a civilian job which they currently hold. After determining that more than a simple information request was involved, a staff member asked Kiya to complete the CTI to determine the extent and nature of services they might require. Given the interview with Kiya and their somewhat below average CTI Total score (adult norms are $T = 45$ and percentile rank = 31), the staff member concluded that Kiya was not encumbered by substantial dysfunctional thoughts and hypothesized that they had moderate readiness for career choice and would require minimal to moderate assistance in making effective use of career assessment and information resources (*screening*). The staff member recommended a self-directed approach to using the center's resources, with professional and paraprofessional support provided to the client as needed. The staff member asked Kiya to discuss the nature of their career problem. Kiya perceived that they were in a dead-end job with little opportunity for advancing or gaining new skills. They had decided on a new occupation that was congruent with their current skills and educational qualifications, but was reluctant to follow through because they were "afraid of making a mistake." The staff member noted that Kiya's higher CA score ($T = 58$; percentile rank = 79) in relation to DMC ($T = 41$; percentile rank = 18) and EC ($T = 46$; percentile rank = 34)

provided additional evidence that being "afraid of making a mistake" was potentially an obstacle in working through the decision-making process (*needs assessment*).

Based on the information available, the staff member hypothesized that Kiya was decided, as opposed to being undecided or indecisive. As service delivery progressed, this initial hypothesis was confirmed by occasional reviews of Kiya's use of resources. After briefly exploring the thoughts and feelings Kiya had about committing to an occupation (including item 35 on the CA scale, "I worry a great deal about choosing the right field of study or occupation," and item 38, "The hardest thing is settling on just one field of study or occupation"), the staff member summarized Kiya's problem in terms of a gap in self-confidence and in their ability to transform choices into actions. The staff member then recommended that Kiya complete the *CTI Workbook* to identify, challenge, and alter specific negative career thoughts (*learning*). In addition to having Kiya focus on *valuing* items on the decision-making checklist, the staff member offered to assist them in completing and carrying out an Individual Action Plan to resolve their career problem.

Case Study 2: Jeff

Jeff is a 20-year-old male college sophomore seeking assistance from a college counseling center in choosing a major field of study. The CTI was included as one component of the counseling center intake procedure. Given Jeff's relatively elevated CTI Total score (college norms are $T = 66$ and percentile rank = 95) and interview data, the counselor hypothesized that Jeff had low readiness for career choice and potentially required a high degree of assistance in making effective use of career assessment and information resources offered in the center (*screening*). The counselor recommended individual career counseling as an appropriate service delivery option and scheduled an individual appointment. While discussing the nature of his career problem, Jeff admitted that he had already changed majors three times and was currently unable to identify an appropriate major or subsequent occupation. He admitted that he was overwhelmed with all of his options and was uncertain about how to proceed. He further stated that he found it difficult to make any important decision. The counselor noted that Jeff's higher DMC score ($T = 69$; percentile rank = 97) in relation to his CA score ($T = 54$; percentile rank = 66) provided additional evidence that he was more confused and overwhelmed about making a choice than he was anxious about making a career commitment, although some generalized anxiety was still present. When the counselor asked about the potential for conflict with significant others, indicated by the EC score ($T = 67$; percentile rank = 96), Jeff disclosed that his parents were upset that his progress in college varied so much from that of his more successful older brother (*needs assessment*). Based on the information available, the staff member hypothesized that Jeff was indecisive. After the client elaborated his responses to DMC and EC items rated "strongly agree," the counselor summarized Jeff's situation as a gap in career decision-making skills influenced by negative thinking. The counselor helped Jeff complete the Individual Action Plan in the *CTI Workbook*, sequencing individual counseling and the completion of Sections 3 and 4 of the *CTI Workbook* (*learning*) prior to utilizing career assessment and information resources.

Case Study 3: Carlton

Carlton is a 17-year-old able-bodied, Hispanic, male, athlete who is a high school senior participating with other students in a three-period classroom career guidance unit designed to

facilitate school-to-work and school-to-school transitions as part of the social studies curriculum. The Career State Inventory (CSI) and Career Thoughts Inventory (CTI) were completed as initial activities in the guidance unit and delivered by a school counselor with teacher support. Carlton's CSI score was an eight. He listed alternatives only including professional athlete, athletic director, or athletic coach. He indicated that he was satisfied with his choices but lacked clarity in making a decision (based on CSI responses).

In the class setting, the counselor used the CSI manual and Sections 1 and 2 of the *CTI Workbook* to help the students interpret their scores. Given his somewhat above average CTI Total score (high school norms are $T = 55$ and percentile rank = 69), Carlton concluded that he could use some help with their career choice (*screening*). During a student group discussion of career concerns, Carlton stated that he was undecided about his plans after high school and unsure how to go about making a good choice. The counselor noted that Carlton's higher DMC score ($T = 59$; percentile rank = 82) in relation to his CA score ($T = 46$; percentile rank = 34) and EC score ($T = 60$; percentile rank = 84) made sense, given that he felt confused and overwhelmed about the choices before him. He stated that he really did not feel at odds with his parents. The higher EC score is often normalized with clients who might be in a family with more collectivist values, especially if it is common practice for that client to want their parents' or families' input during important decisions in their life (*needs assessment*). The counselor suggested to Carlton that he might benefit from some career assistance (moderate readiness). Student peer counselors and parent volunteers were available in the afternoons in the school career resource room to provide information on decision-making and to help with accessing appropriate career resources. The counselor then provided all students in the class with an overview of the remainder of the *CTI Workbook* and helped them use the IAP to state initial goals, as well as to list activities, resources, and priorities related to their goals by presenting examples of typical action plans. After the classroom teacher approved a draft IAP, completing the plan became a graded project assignment for students in the class. Carlton included the completion of Sections 3 and 4 of the *CTI Workbook* on the IAP (*learning*) in addition to resources for assessment and information. The counselor announced their availability to answer any specific questions about the CSI, CTI, the *CTI Workbook*, or available guidance resources and services.

Career State Inventory[45]

The Career State Inventory (CSI) was developed initially as the Career Decision State Survey (CDSS) to facilitate research and practice in vocational psychology and career development. The primary purpose of this measure was to assess readiness for career problem solving and decision-making. The CSI was developed by the authors working through Florida State University's Center for the Study of Technology in Counseling and Career Development. Career practitioners and researchers may freely use the instrument with proper citation of the instrument and credit as noted below. Sale of the CSI for profit is not authorized by the authors or FSU. The CSI and the *CSI Manual* are provided at https://career.fsu.edu/sites/g/files/upcbnu746/files/The%20Career%20State%20Inventory%20Manual%203rd%20ed_2022.pdf. *CSI Manual* topics include (a) an examination of the Career Decision State construct as a state of consciousness through the perspective of CIP theory; (b)

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procedures for administering and scoring the instrument; (c) prior research examining the concurrent validity of the CSI in relation to similar constructs; (d) CSI psychometric characteristics; and (e) ways in which CSI results could be implemented and interpreted in the process of career service delivery or training of career services providers. More than eighteen studies have shown the usefulness of the CSI as both a measure of readiness and as a pre-post measure to assess the effectiveness of career interventions.

Decision Space Worksheet[46]

The Decision Space Worksheet (DSW) activity (Peterson et al. 2019; 2016), focused on understanding clients' career concerns, is a projective assessment that reveals elements in the personal, social, and economic context of a career problem that clients are perceiving in the moment. The DSW (see Appendix G) consists of a list-making task in which individuals identify and record elements associated with a presenting career problem (e.g., thoughts, feelings, people, relationships, financial aspects), and identifying whether the element is having a positive, negative, or neutral influence on the career concern (Solomon, 2011). This is followed by a cognitive-mapping task that enables individuals to prioritize the relative importance of the respective elements as they impact the career decision.

The DSW helps to define the career decision space (CDS), that is, all cognitive and affective components contained in what is referred to as "working memory" (a combination of short-term and long-term memory associations in the moment). Working memory comprises all the information individuals have to solve a problem, what's affecting the solving of a career problem, competing issues, influences, including other life factors that influence the consideration of options. If there are too many things going on in a person's life, this can potentially overwhelm the CDS. In these types of situations, the DSW activity can help clients isolate, label, and evaluate the relative importance of various elements in the CDS, thereby helping to reduce some of the confusion and anxiety involved in making a career decision. According to cognitive information processing (CIP) theory (Sampson et al., 2004; 2020), the DSW activity is typically administered in the Communication phase of the CASVE cycle and facilitates clients (as well as career practitioners) becoming aware of the complexity of a presenting career problem as clients engage in career exploration and decision-making. In this way, it can serve as another measure of readiness for career problem solving. See Chapter 7 for more information on readiness factors.

Purpose of the DSW

As described above, the Decision Space Worksheet (DSW) activity helps clients to conceptualize, organize, and clarify all the elements associated with their career problem. Typical issues that may arise through the DSW activity are highlighted in Table 8.3 (Peterson et al., 2010). Be aware that the DSW is a "state" instrument, as opposed to a "trait" instrument, in that its results are valid only at the moment of administration. We have found in case studies that the lists and maps typically change as individuals progress through the CASVE cycle. Thus, test-retest reliability data are irrelevant regarding the DSW activity. Further, the DSW can be used in various service delivery formats, including brief staff-assisted, individual counseling, curricular interventions, and group counseling (Sampson, et al. 2004).

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[46] Content in this section was used or adapted from Peterson et al. (2016). Used or adapted with permission.

This DSW activity also facilitates becoming mindful of denied experiences. Clients may not be fully aware of all the issues going on in their life situation. This activity helps to put data in working memory that needs to be there in order to fully engage the career problem. It may also reveal clients' mental health issues that are con-current with the presenting career issue, which could be taking more attention space in working memory than the career issue itself. See sample DSWs in the [DSW Manual](#).

Recommended Procedures for Administering the DSW

Setting

If possible, the DSW should be administered in a quiet area of the main career advising and counseling space. In keeping with the CIP theory-based approach, it may be used during drop-in, brief staff assisted services and/or individual counseling. Practitioners should be sensitive to the fact that the DSW often invokes private and sensitive information, and some clients may prefer not to be overheard when "thinking aloud" (i.e., verbalizing their thoughts to the career practitioner as they work through the activity) or when discussing the completed results with a career advisor or counselor.

Directive to Clients

"The Decision Space Worksheet is an instrument that can help you identify and prioritize the elements in your life today that are related to your career problem or decision. Most clients enjoy participating in this activity. You will notice there is a front page and a back page. The front page is where you state your career problem or decision in your own words and list all thoughts, feelings, people, relationships, financial factors, or anything else that may have an influence on your career decision on the lines provided. You also rate each item in terms of whether it is a positive, neutral, or negative influence on the career problem. The second page consists of a circle in which you draw small circles of different sizes in proportion to the importance of each element listed on the first page. If you feel like it, you may talk aloud as you perform the respective tasks. When you finish, we can discuss the list and the map. Do you have any questions?" In some cases, clients may prefer to work alone and not have a counselor or career advisor watch them while they complete the activity.

Having clients complete the DSW provides a quick, effective way for clients to grasp the comprehensiveness of what is happening in their life in the moment. The DSW activity enables clients to step outside of themselves and look inward at all the elements and how they relate to each other in relation to the career decision at hand. Ultimately, the information gained from this activity can contribute to the development of an Individual Learning Plan (ILP).

The DSW and the Development of the ILP

Responses to the DSW that could be included as items on the ILP may be the following:

1. Readiness activities such as taking the CTI and utilizing the *CTI Workbook*;

2. Taking a career assessment such as the Self-Directed Search to enhance self-knowledge;

3. Gathering educational, occupational, or employment information to enhance option knowledge;

4. Using the [Guide to Good Decision-Making Exercise](#) to address problematic CASVE cycle phases related to DSW results;

5. Consulting with campus or community-based counseling services when mental health aspects of the presenting problem, such as moderate to severe depression or anxiety, sleep disorders, addictions, etc., are overwhelming the career decision space;

6. Consulting with student or community services, when financial matters (including the need for emergency funds), disability assistance, housing, etc., are aspects of the career decision space; and

7. Student-parent, or couples counseling when family or personal relationship issues are part of the career decision space.

It is important for career practitioners to be mindful of the fact that completing an ILP can help enhance career problem-solving skills (e.g., defining a problem, developing and prioritizing alternatives, developing and carrying out a plan) as well as meta-cognitive skills (developing cognitive strategies, developing self-efficacy as career decision maker, acquiring capacity for self-awareness and self-monitoring). See the [DSW manual](#) for an example of an ILP.

Table 8.3

Classification Code of Thoughts, Feelings, Events, Circumstances, and Individuals Listed on the Decision Space Worksheet.[47]

Principle Dimension	Construct Definition	Examples
Quality of Life	The manifestation of values in the work environment to which an individual aspires.	Happiness Prestige Leisure Time Travel Variety
Money	Factors pertaining to the financial costs and benefits associated with a given career choice.	Salary Benefit packages Cost of Education
Family	Issues surrounding members of the nuclear or extended family, individually or as a unit.	Mother Parents Uncles

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[47] Adapted from Peterson et al. (2010). Adapted with permission.

Principle Dimension	Construct Definition	Examples
Education	All factors relating to the acquisition of the knowledge necessary for a given career choice.	Major Length of program Difficulty of coursework
Interests	The emotional arousal associated with the career domain being considered.	Interesting Not boring I enjoy working with computers
Self-Doubt	Any statements that reflect individuals' insecurity regarding their character or abilities.	Can I do the job? Am I smart enough? I always change my mind.
Employment	All statements referring to obtaining the desired career position.	Job market Can I get a job after graduation? Advancement opportunities

Additional CIP Theory-Based Readiness Measures

The CASVE-CQ

Measures related to CIP theory have continued to evolve. The CASVE-CQ (Werner et al., 2021), mentioned earlier in Chapter 7, is a 42-item instrument with six subscales, used to identify where a client currently is in the CASVE cycle, and is recommended to be used prior to engaging with a career practitioner, as well as to monitor progress (See a copy of the instrument in Appendix H at the end of this chapter). Scores on the six subscales can indicate whether or not a person is ready to move on to the next phase. Currently, the CASVE-CQ is used in two main areas of practice, a CIP-based career counseling group offered to college students identified at risk for drop-out (Leuty et al., 2015) and individual career counseling sessions led by counselors in training for students in a university-credit "Careers in Psychology" course. In both interventions, the CASVE-CQ is administered prior to the initial meeting. This allows practitioners to determine the likely decision-making activities and progress of the clients. The CASVE-CQ is paired with the Progress Tracker worksheet that visually displays the decision-making activities and the client's progress. Incomplete CASVE-CQ activities can inform the client's individual learning plan (ILP) activities as possible next steps in addressing their career problem or progress in career decision-making. Throughout the interventions, the CASVE-CQ items and Progress Tracker are revisited to determine if additional decision-making activities have been engaged or the CASVE cycle phases satisfactorily completed. The integration of completed CASVE-CQ items, the Progress Tracker, and the ILP informs theory-guided career

interventions and allows clients to see the progress made as a part of the intervention and their work outside the counseling room.

The CASVE-CQ's initial development followed a purposeful approach to item development based on how CIP theory defines the CASVE cycle phases. Using these theoretically derived items, two exploratory factor analyses (EFA), one in an adult and the other in a college-student sample, supported a theoretically consistent six-factor solution. A confirmatory factor analysis (CFA) was conducted with a sample of working adults who were considering a work-related change. The CFA confirmed the factor structure found in the previous EFA analyses. A second-order factor analysis to assess the utility of a CASVE-CQ total score was also employed. Consistent with theory, this model did not converge, and a total score for the CASVE-CQ was not supported. Validity support for the CASVE-CQ as a decision-making progress measure has also been explored. Findings suggest that greater decision-making activity in each phase/subscale is associated with lower career decision-making difficulties, stable vocational identity, and greater career commitment. Development of the CASVE-CQ continues as populations of use are considered and practical applications are explored (Werner et al., 2021).

The CIP Skills Survey

The CIP Skills Survey (CSS; Osborn et al., 2020) is a four-item measure that evaluates skills related to the four pyramid components on a six-point rating scale. Two of the items in particular, rating of decision-making skills and executive processing/self-talk, inform readiness for career choice. Research (Hayden & Osborn, 2020; Osborn et al., 2020; Osborn et al., 2021) has supported the reliability of the instrument, with alphas ranging from .82 to .90 in those studies.

Using Readiness Assessment Measures in Evidence-Based Practice

Readiness assessment measures, such as the CTI and CSI can be used in studies of evidence-based practice (Whiston, et al., 2017). At the Florida State University Career Center, evidence-based practice has been established for the undergraduate career planning course (Bertoch et al., 2014; Miller et al., 2018; Osborn et al., 2007; 2020), individual counseling (Ahn, 2020), brief staff-assisted career services (Osborn et al., 2016), and self-help career services (Kronholz, 2015). Miller et al., (2018), Osborn et al. (2020) and Reed et al. (2001) noted that the CTI has proved useful as a pre-posttest to document the impact of a career planning class. Additional research highlighting applications of CIP theory in evidence-based practice can be found in the CIP bibliography.

Combining Data from Diagnostic Interviews and Diagnostic Measures

Best practice in the assessment of readiness for career choice and career interventions requires that practitioners conduct at least a brief diagnostic interview, in addition to administering and interpreting a diagnostic measure as appropriate to the client's presenting concern. In the comprehensive screening section of Chapter 7 in this book, a description is provided of how to combine data from diagnostic interviews and diagnostic measures to assess a client's readiness for career choice and their ability to effectively engage with career interventions.

Chapter 8 Summary

This chapter examined the use of the Career Thoughts Inventory as a measure of readiness for career choice. The use of the CTI was described in terms of screening, needs assessment, learning, appropriate populations, integrating the CTI into service delivery, administration and scoring, use of terminology, diversity issues, and professional requirements. The development of the CTI was then described in terms of the creation of items and the design of the workbook, as well as the standardization, reliability, validity, and utility of the measure. Three case studies were then presented showing different scores and resulting recommendations for career assistance. Other established and emerging CIP theory-based measures were presented, with scoring and interpretation instructions along with psychometric properties.

Getting the Most Benefit from Reading Chapter 8

To effectively learn the material in this chapter, complete one or more of the following activities:

- Career Thoughts Inventory

  o Complete, score, and profile the CTI yourself, and have a career practitioner help you interpret the results.

  o Complete the *CTI Workbook* and have a career practitioner help you review your work.

  o Discuss the three case studies with a career practitioner who has used the CTI. Focus on using the CTI for screening, needs assessment, and learning.

  o Compare use of the CTI in a counseling center versus a career center.

  o Compare the reliability, validity, and utility evidence for the CTI with that of another test that you have used in practice.

- Career State Inventory

  o Complete, score, and profile the CSI yourself, and have a career practitioner help you interpret the results.

  o Consider what interventions you might use if a client showed lower scores in one or more of the three CSI sections.

- Decision Space Worksheet

  o Complete the DSW yourself, and have a career practitioner help you interpret the results.

  o Consider previous decisions you've made, and how the items you listed may have differed or been similar at these times. What do these differences suggest?

  o Which items might need to be addressed with an individual learning plan? What strategies and resources might be included?

- Compare the results of the CTI, CSI, and DSW. How do they inform each other? What overlaps occur? What unique information do they provide?

- Considering the gap between your current and ideal career decision state (i.e., Communication phase of the CASVE cycle), how do the results from one or more of the inventories in this chapter provide additional context for your career concern?

- Conduct a search for recent publications on the instruments highlighted in this chapter. What new findings have been discovered? How do they inform CIP theory, research, and practice?

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Appendix G
Decision Space Worksheet (DSW)

Continue on the following page.

From: *Cognitive Information Processing: Career Theory, Research, and Practice*, Chapter 8 (https://doi.org/10.33009/fsop_sampson1123.ch08).

Name_____

Decision Space Worksheet (DSW)

The career decision you are considering _____

Please list all thoughts, feelings, circumstances, people, or events that bear on the career decision you are making. Then, for each thought, feeling, circumstance, person, or event, please indicate whether each is having a negative, positive, or neutral impact on your decision by circling the corresponding symbol at the end of each line.

	Negative	Neutral	Positive
1._____	--	**0**	**+**
2._____	--	**0**	**+**
3._____	--	**0**	**+**
4._____	--	**0**	**+**
5._____	--	**0**	**+**
6._____	--	**0**	**+**
7._____	--	**0**	**+**
8._____	--	**0**	**+**
9._____	--	**0**	**+**
10._____	--	**0**	**+**

DIRECTIONS CONTINUE ON NEXT PAGE

The Decision Space

Directions:

- The large circle below represents the total decision space of your career decision.
- Draw circles within the large circle to represent each item on your list. Use the size of the circles you draw to represent the relative importance of each item to your career decision.
- Be sure to label each circle according to the corresponding item number from the list you made.
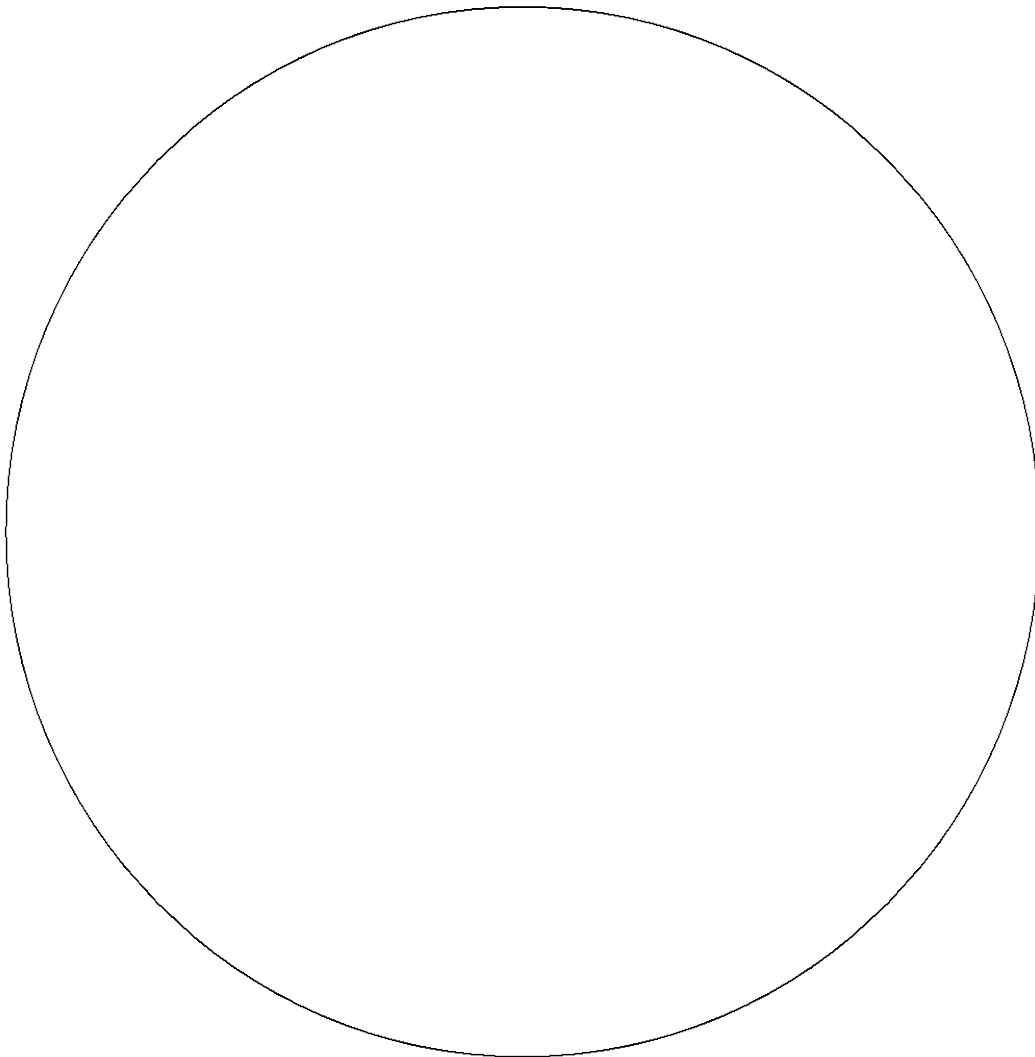
Appendix H
The CASVE Cycle Questionnaire

Continue on the following page.

From: *Cognitive Information Processing: Career Theory, Research, and Practice*,
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The CASVE Cycle Questionnaire
By Brianna Werner and Emily Bullock-Yowell

Directions:

As you complete this questionnaire, please keep in mind a current career problem or career decision. Answer each question with YES indicating this statement applies to your current situation or No indicating the statement does not apply to you currently. All items may not apply to you; simply answer those items with NO. If you are currently in an educational program or hold a position outside of your final career goal, it may be beneficial to think about some items in terms of your final career goal.

Key Terms you will see in the questionnaire items:

Career problem: an identifiable discrepancy or gap between where you are currently in your career and where you would like to be in the future. Examples of career problems are choosing a major, obtaining an internship, selecting a career field, or obtaining a job.

Career values: factors you find important to consider when making career decisions. Examples of career values are income level, work and family balance, independence, and prestige.

All items will be answered with "yes" or "no".

Career problem/goal: _____

Communication 1

1.	I am overwhelmed by making a career decision.	Y / N
2.	I have difficulty thinking about my future career goals.	Y / N
3.	There is pressure in my life to make a career decision.	Y / N
4.	I have a problem concerning my career path.	Y / N
5.	I worry about needing to make a career decision.	Y / N
6.	I feel sad or worried when I think about my need to make a career choice.	Y / N
7.	I find ways to avoid making a career decision.	Y / N
8.	The amount of effort it takes to make a career decision is overwhelming.	Y / N

Total N: __

Analysis

1.	I am unsure where to begin to solve my career problem.	Y / N
2.	I need help identifying my career options.	Y / N
3.	I need more information about my career options.	Y / N
4.	I need more information about myself to make the best career choice.	Y / N
5.	I do not have enough information to compare my career or job options accurately.	Y / N

Total N: __

All items may not apply to you; simply answer those items with NO.

Synthesis

1. I can identify many career or job options that match my values.   Y / N
2. I can identify multiple jobs that match my career interests.   Y / N
3. I can identify multiple career options that match my career-related skills.   Y / N
4. I have explored a large amount of career or job options and then narrowed those down to a few I

    feel good about.   Y / N
5. I can narrow my career or job options to a few that I am seriously considering.   Y / N
6. I can compare my career or job options based on information I have gathered about them.   Y / N
7. I know the strengths and weaknesses of each of my career options based on my own career values.   Y / N

8. I have compared the advantages and disadvantages and benefits associated with each of my career options. Y/ N

     Total Y: __

Valuing

1. The career options I am considering satisfy my career values.   Y / N
2. I have considered the costs and benefits of my career options.   Y / N
3. The options I am considering match my values, interests, skills, and preferences.   Y / N
4. Who I am (e.g., culture, place in the community and society) fits with the options I am considering.   Y / N
5. My career options match my aspirations.   Y / N
6. My career choice fits well with my lifestyle.   Y / N
7. My career choice is a good match with my personality.   Y / N
8. My career choice will enable me to live life in the way I want/prefer.   Y / N

     Total: Y: __

Execution

1. I am ready to take the necessary steps to reach my career goal.   Y / N
2. I am taking the necessary steps to reach my career goal.   Y / N
3. I am in the process of achieving my career goals.   Y / N
4. I know what I will need to be doing in six months from now to reach my career goal.   Y / N
5. I have a plan of action to achieve my career goal.   Y / N
6. I will try out my top career choice.   Y / N
7. I have applied for my top career choice.   Y / N
8. I have begun the training and/or education necessary for my top career choice.   Y / N

     Total Y: __

All items may not apply to you; simply answer those items with NO.

Communication 2

1.	Even though I have told others I have made my career decision, I do not feel very good about it.	Y / N
2.	I made a career choice but think I may need to make a new choice.	Y / N
3.	My career choice has not improved my situation.	Y / N
4.	The career choice I made has not made me feel any better.	Y / N
5.	I continue to experience anxiety even though I have made my career choice.	Y / N

Total N: __

Phase	Score
Communication 1	
Analysis	
Synthesis	
Valuing	
Execution	
Communication 2	

Name: _____

Comm. 1: _____Analysis: _____Synthesis: _____Valuing: _____Execution: _____Comm. 2: _____

CASVE Cycle Progress Tracker

Use this progress tracking sheet along with the CASVE-CQ. Color in the number of sections in each ring that corresponds with your score for each phase, starting with the sections with bold outlines. Once you have colored passed the bold section, talk to your career practitioner about moving on.

The CASVE Cycle Questionnaire (CASVE-CQ) Progress Tracker was developed at the University of Southern Mississippi by Kendall Klumpp and Emily Bullock-Yowell with important contributions from a variety of collaborators. The Progress Tracker is under a Creative Commons Attribution-NonCommercial-No Derivatives 4.0 license, allowing any reader to copy and distribute the CASVE-CQ without permission of the authors provided that the authors of the content are given proper attribution, that the content is not modified in any way, and the materials is not used for commercial purposes.
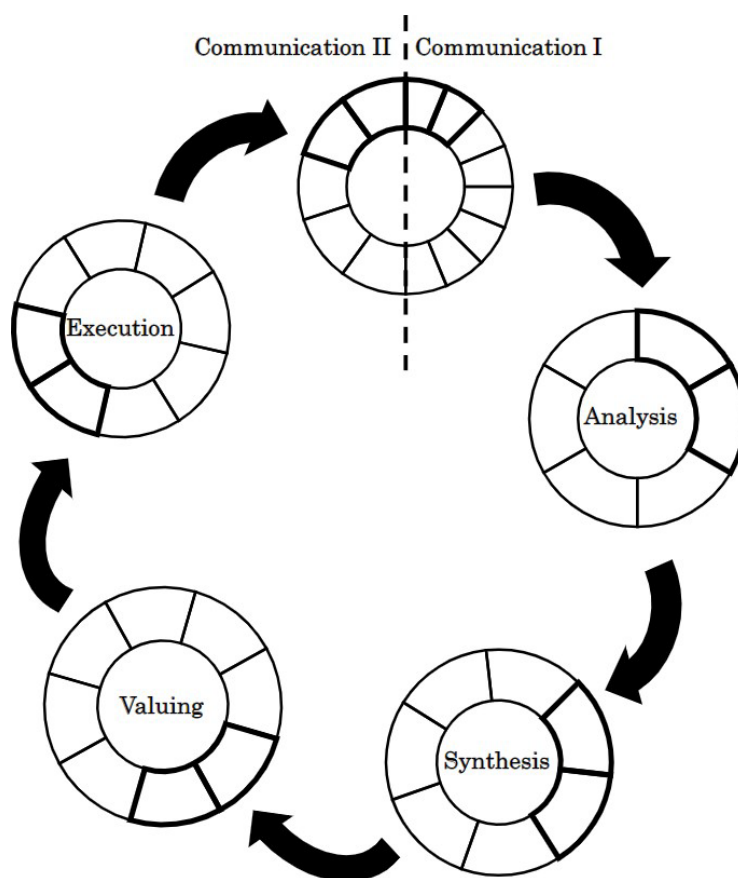
CHAPTER 9
USE OF CAREER RESOURCES IN CAREER INTERVENTIONS

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This chapter explores the selection and use of career assessments, information, and instruction to help persons make career choices. The potential contributions of each resource are described, sources for the resource are identified, issues of quality are considered, and strategies for use are examined. After reviewing this chapter, the reader should be better prepared to select and use career resources to meet persons' needs. The chapter begins with a general discussion of CIP theory and the use of career assessment, career information, and instruction, and then continues with a more comprehensive examination of assessment, information, and instruction.

The chapter concludes with a description of a four-step model for promoting effective use of career resources, the integration of career resources and service delivery models, a chapter summary, and recommendations for getting the most benefit from reading the chapter.

CIP Theory and the Use of Career Assessment, Information, and Instruction[48]

The purpose of a career intervention should be to enhance the ability of persons to use knowledge gained from career assessment, information, and instruction to make informed and careful career decisions. Career assessment, information, and instruction should be presented in the form of a learning event that results in a change in knowledge, attitudes, or skills (Peterson et al., 1991; Sampson et al., 2004). In the next section, we present examples of various types of assessments, information, and instruction in relation to CIP theory, specifically the pyramid of information processing domains and the CASVE cycle. The section ends with an examination of the use of career assessment, information, and instruction in differentiated service delivery.

The Pyramid of Information Processing Domains

Assessments and information used in career services can be integrated within the pyramid of information processing domains as illustrated with the following examples.

- *Self-knowledge domain* – The practitioner and client review information from career assessments, such as a values card sort, autobiography, career information delivery system, or an interest inventory.

- *Options knowledge domain* – The person obtains a description of a typical working day for an occupation from a career information delivery system, an information interview, or from watching an online video or reading a blog. A schema for organizing the world-of-work, such as the Holland hexagon (Holland, 1997), is presented as a handout. The practitioner discusses with the person the results of an occupational card sort (Osborn et al., 2016).

- *Decision-making skills domain* – The practitioner asks the client how they have made important decisions in the past, how family or significant others were involved, and how they would like this present decision to be similar or different. The practitioner explains the five steps of the CASVE cycle, which are simulated in a written exercise or a classroom exercise.

- *Executive processing domain* – The practitioner obtains information about the person's negative career thoughts using the Career Thoughts Inventory (Sampson et al., 1996a), a card sort, or a practitioner-conducted structured interview. A practitioner may then explain this information and suggest methods for identifying, challenging, and altering negative career thoughts using print-based materials such as a cognitive restructuring exercise or the *CTI Workbook* (Peterson et al., 1991; Peterson et al., 1996; Sampson et al., 1996b Peterson et al., 2002).

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[48] Content in this section was used or adapted from Sampson et al., (2004). Used or adapted with permission.

The CASVE Cycle

Assessments and information used in career services can be integrated within the CASVE cycle as illustrated with the following examples.

- *Communication* – A description of the career and family issues that are typically faced in returning to paid employment after a period of absence is presented in an interview with an individual who has experienced similar experiences, or in a panel discussion at a workshop. The person completes an autobiography that includes a sequence of career successes and challenges.

- *Analysis* – The practitioner provides explanations of basic education requirements for degree or certificate programs presented on a college/training site website, and the person then reviews the requirements on their own or with an academic adviser.

- *Synthesis* – The person obtains a list of potentially appropriate occupations through use of an interest inventory. A variety of career options in the computer field are presented at a seminar on emerging occupations in e-commerce. A right-brain activity such as free-form thought listing can also be used.

- *Valuing* – The practitioner shares information, using a career guidance system or a printed handout, related to work-life balance. After describing Super's (1990) life space, life roles concepts as a guide, the practitioner asks the client to identify which roles are currently salient to the individual, and then asks the person to discuss how those roles would be affected by the assumption of the worker role. The person completes a comparison table that leads them to examine the costs and benefits of each option under consideration for themselves and their personal values, and to consider the impact of each option for others that are important to them and may be impacted by their decision.

- *Execution* – The practitioner provides a description of a functional resume (which is organized in a way to emphasize transferable skills as opposed to a chronological resume which emphasizes job titles and employment settings), followed by the creation of a resume using an online resume builder system, e.g., https://www.jobscan.co/resume-builder (Reardon, et al, 2022). The person finds several examples of current job openings and creates a word cloud of typical job requirements by accessing an online word cloud generating program, and then uses the most commonly listed words to help them design a skill-focused resume that they can highlight in a job interview.

Differentiated Service Delivery and Career Assessment, Information, and Instruction

As explained in Chapter 4, some persons are more ready to engage in career choice than others. Similarly, some persons are better prepared to use, and benefit from career resources (assessment, information, and instruction) in career intervention. The goal of CIP theory's differentiated service-delivery model is, "to provide the right *resource*, used by the right *person*, with the right level of *support*, at the lowest possible cost" thus avoiding overserving and underserving clients in relation to their needs (Sampson, 2008, p. 6). As explained in Chapter 7, key aspects of the differentiated service delivery model include: (a) screening to assess readiness for career choice, (b) selection of a level and type of career intervention that best meets persons' needs, and (c) modifying the selection and use of career resources based on individuals' progress

in using the resources (response to intervention). Osborn et al. (2015) provided an example of this differentiated approach in integrating a career assessment into a career intervention, in which clients seeking career services via a drop-in model completed pre and post surveys that examined their knowledge, confidence and anxiety about their career choice prior to and following the drop in service, as well as evaluating their desire for receiving additional career services and their perceived need for level of support needed (i.e., self-help, drop-in, or individual case-managed).

A sequential model (Sampson, 2008) is designed to promote effective client use of career assessment and information resources. This model is presented in more detail in Chapter 7, and includes the following four steps:

1. *Understanding* involves the practitioner clarifying the client's career assessment and information needs, including assessing their readiness for career choice and career intervention.

2. *Recommending* involves the practitioner helping the client select and sequence career assessments and information that are appropriate for their needs, while pacing the use of resources at a rate that is congruent with their readiness for career choice and career intervention that was identified in the understanding step above.

3. *Orienting* involves the practitioner preparing clients to make effective use of career assessments and information.

4. *Follow-up* involves the practitioner checking that clients have appropriately used the career assessments and information on their individual learning plan (ILP) to achieve their goals and that they have a plan of action for the future.

<div align="center">

Career Assessment[49]

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Career assessment is typically used to help persons clarify their knowledge of self and their options. This type of assessment is distinguished from the use of readiness assessment measures described in Chapter 7 and 8. The examination of career assessment in CIP theory begins with a description of the potential contributions of career assessment to informing a career choice, and continues with a schema for organizing career assessments, identifying available career assessments, evaluating the quality of career assessments, and promoting effective use of career assessments. The section ends with selecting career assessments that optimize features and costs.

Potential Contributions of Career Assessment to Career Choice

Career assessment has the potential to help persons progress through the CASVE cycle. The following section examines seven potential contributions of career assessment to career choice.

Enhancing Awareness of Career Problems and Promoting the Motivation to Change

Readiness assessment can result in increased awareness of a career problem (the gap) and greater motivation to engage in problem solving and decision-making (the Communication phase

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[49] Content in this section was used or adapted from Sampson et al., (2004) and Sampson (2008). Used or adapted with permission.

of the CASVE cycle). Some persons may be vaguely aware that they have a problem but have poor motivation for working to remove the gap. In addition to the CTI, other readiness assessment measures identified in Chapter 8, as well as Sampson et al. (2000; 2004; 2013) can be used to promote awareness of a gap that needs attention through problem solving and decision making.

Motivating Persons to Clarify Knowledge of Self

Career assessment can motivate persons to expend the effort necessary to clarify knowledge of their values, interests, and skills and employment preferences (the Analysis-self-knowledge phase of the CASVE cycle) Many persons are curious about what a career assessment will reveal about themselves. This curiosity can be used to motivate self-knowledge clarification by asking persons how assessment results compare with their existing self-perceptions, including what new insights they may have gained. In addition, although all persons have some knowledge of their values, interests, skills, employment preferences, personality, and aptitudes, they often do not have the information organized in a way that can be easily used in making career choices. Using a simple schema for organizing self-knowledge, such as values, interests, skills, and employment preferences, can make it easier for persons to manage and use the information they have about themselves.

Motivating Persons to Enhance Knowledge of the World-of-Work

Career assessment can also motivate persons to clarify what they know about the world of work (the Analysis-options phase of the CASVE cycle). The prospect of reviewing numerous occupations and related education and training options can be overwhelming, especially for persons with low readiness for career choice. Having a simplified schema for organizing the world-of-work can make the task of learning about options less daunting because all options can be categorized according to the schema. Instead of dealing with hundreds of options, persons can deal with a manageable number of occupational categories that relate to almost all occupations. Having a way of effectively organizing what they already know can motivate persons to add further knowledge. Many interest inventories and career information delivery systems present assessment results organized by a world-of-work schema, such as the Holland hexagon (Holland, 1997) in the Self-Directed Search (Holland & Messer, 2017a). Card sorts can also be used as a cognitive mapping tool that allows persons to reveal a personalized schema of the world-of-work and their depth of occupational knowledge (Osborn et al., 2016).

Generating Career-Related Options

Career assessment can also help persons generate career-related options that they might not have considered in the past (the Synthesis-Elaboration phase of the CASVE cycle). Although most persons have an idea of one or more career-related options worth considering, they generally are not aware of the full range of occupations or programs of study that are congruent with their values, interests, skills, and employment preferences. Practitioners need to be sensitive to persons whose life history, disability, ethnicity, socioeconomic circumstances, and related factors may have limited their awareness of occupational alternatives. Many interest inventories and career information delivery systems generate career options that fit various combinations of values, interests, skills, and employment preferences. The concern, however, in using career assessments to generate career options for consideration is that persons may view generating options as the end of career exploration rather than an opportunity to learn more about the

potentially appropriate options identified by the assessment. Practitioners need to ensure that persons understand that career assessments are not tools for obtaining quick solutions to career problems with little effort. Career assessments are best used to promote rather than limit career exploration (Osborn & Zunker, 2016).

Narrowing Career Options after Generating Career Options

Some career assessments and career information delivery systems provide an indication of how a person's characteristics are related to specific occupations and educational opportunities (the Synthesis-Crystallization phase of the CASVE cycle). This use of career assessments can help persons decide which alternatives merit further consideration out of all possible options. One potential problem with the options generated by career assessment tools or systems, is that persons may assume that the assessment or computer system is very precise and that options that are not highly rated do not warrant further consideration, even when those options may be worth exploring for some other reason. Alternatively, they may assume that the options identified should be pursued without greater exploration of how a particular option may fit with other considerations such as family responsibilities, lifestyle preferences, or financial capability. With career information delivery systems, it may be useful for individuals to complete the assessment and search functions several times to examine the impact of changing individual preferences on the options generated. More than one system or inventory/approach might also be used, as it may generate additional options for consideration. The narrowed career options can then be used in the subsequent Valuing phase of the CASVE cycle.

Evaluating Narrowed Options

Persons can reconsider or add to the self-knowledge needed to choose among options remaining after completing Synthesis-Crystallization (and moving on to the Valuing phase of the CASVE cycle). Reviewing values, interests, skills, and employment preferences provides part of the basis necessary for persons to evaluate the relative costs and benefits associated with the prioritized list of career options they are considering. For some persons, weighing their options with respect to family, cultural, and societal factors may be important in narrowing their choices. Careful thought about several competing career options may cause persons to reevaluate their values, interests, skills, and employment preferences, potentially leading to generation of new career options (Synthesis-Elaboration).

Preparing for Choice Implementation

The results from previous career assessments can help persons prepare for implementing their choices by clarifying how their characteristics fit with various occupational, educational, or employment options (the Execution phase of the CASVE cycle). For example, assessment resources that were previously used to clarify values, interests, skills, and employment preferences can now also be used to provide persons with a focal point for reviewing employment information (e.g., job listing websites, employer websites, videos, etc.). As a result, persons are better prepared to articulate, in an employment interview, how their characteristics and preferences fit with the needs and environment of a potential employer. Previous skills assessments can also be used to complete a skills section of a functional resume or the skills component of an educational and work portfolio. Other online platforms such as online employment or resume banks or networking venues can provide ways to organize and display skills, as well as highlight what skills are required or desired for specific jobs. Discrepancies

between needed and current skills can form the basis for steps to take to acquire the needed skills.

A Schema for Organizing Career Assessments

As we stated in Chapter 1, career assessment can generally be categorized as either self-assessment or practitioner assisted. *Self-assessment* resources are designed to be used without practitioner assistance to select, administer, score, profile, and interpret the measure. This assumes that the self-assessment has been validated for self-help use without practitioner involvement. Self-assessments include objective instruments and structured exercises. Self-assessment is appropriate for persons with high decision-making readiness who can independently make effective use of career resources. *Practitioner-assisted assessments* are designed for use within the context of a helping relationship (typically career advising and counseling) with a practitioner who is qualified to use the assessment. The person and the practitioner collaboratively select an appropriate assessment, with the practitioner supervising or providing administration, scoring, profiling, and interpretation. Practitioner-assisted assessments include objective instruments, subjective or projective approaches, structured exercises, card sorts, and interviews (both structured and unstructured). Practitioner-assisted assessments are appropriate for persons with moderate to low decision-making readiness who are using career resources with the practitioner's assistance. Although a self-assessment measure can be ethically used in a practitioner-assisted environment, it is unethical for a practitioner to give a person a practitioner-assisted assessment in a self-help environment because these measures are not typically validated for such use (Sampson et al., 2002). As stated in Chapter 7, practitioner-assisted assessment can occur face-to-face or at a distance.

Table 9.1 presents a schema for organizing practitioner-assisted assessment (Peterson et al., 1991). This schema is provided to help practitioners generate a full range of possible options for career assessment. Examples of career assessments can be categorized by the *stimulus* the person receives (clear or ambiguous) and the *response* the person makes to the assessment (clear or ambiguous). Practitioners are encouraged to use multiple categories of career assessment shown in Table 9.1 and to avoid the assumption that career assessment consists only of objective measures having a clear stimulus and a clear response.

Table 9.1

Examples of Options Available for Practitioner-Assisted Career Assessment

Nature of the Stimulus and Response	Example
Clear Stimulus and Clear Response	- Career State Inventory (Sections 2 and 3) - Career Thoughts Inventory - CASVE Cycle Questionnaire - CIP Questionnaire - StandardSDS - Strong Interest Inventory - Campbell Interest and Skills Survey

Nature of the Stimulus and Response	Example
Clear Stimulus and Ambiguous Response	• Decision Space Worksheet • Card sorts • Career-O-Gram • Work sample assessment • Structured interview • Assessment center tasks
Ambiguous Stimulus and Clear Response	• Career State Inventory (Section 1) • Occupational Alternatives Question
Ambiguous Stimulus and Ambiguous Response	• Unstructured interview • Autobiography • Lifeline • Life Space Map

Available Career Assessments

Numerous published and unpublished career assessments are available for use in self-help or practitioner-assisted modes in paper-and-pencil and computer versions. Stoltz and Barclay (2019) presented comprehensive descriptions of 70 career assessments. They used the following schema for categorizing career assessments: (a) aptitude, achievement, and comprehensive measures; (b) interest and work values inventories; (c) career development and career maturity measures; (d) personality assessments; and (e) instruments for special populations. Information is typically provided on target population, purpose, scales, publication date, languages available, time required, presentation of results, scoring, and costs. Stoltz and Barclay (2019) also provided brief descriptive information on 270 additional instruments. Other descriptions of career assessments may be found in Brown (2014), Brown and Lent (2020), Niles and Bowlsbey (2022), Osborn and Zunker (2016), and Zunker (2016). Card sorts offer some unique advantages in career assessment and are covered in more detail in the following section.

Using Card Sorts in Career Assessment[50]

Card sorts, as a qualitative career assessment, were first used in the 1960's (Tyler, 1961) as an interactive, hands-on assessment technique and an intervention to foster career exploration and decision-making (Dolliver, 1967; Williams, 1978; Jones & DeVault, 1979; Osborn et al., 2016). They received their name because they were actual cards that clients would sort into different piles. The card sort process typically involves a client sorting a deck of cards with an occupation printed on one side of each card into piles according to the purpose of the sort and the directive given by a career practitioner. The number of cards in a deck may vary. Sometimes,

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[50] Osborn, D. S., & Bethell, D. B. (2009). Using card sorts in career assessment. *Career Planning and Adult Development Journal*, *25*, 101-114 and Osborn, D. S., Kronholz, J. F., & Finklea, J. T. (2016). Card sorts. In M. McMahon, & M. Watson (Eds.), *Career assessment: Qualitative approaches* (pp. 81–88). Sense Publishing. https://link.springer.com/chapter/10.1007/978-94-6300-034-5_9

there would be structured instructions such as, "Sort into one of these piles," which could have header cards about the degree to which a card descriptor was similar/dissimilar to the person, how desirable the descriptor was, and so forth. Card sorts instructions might also utilize an ambiguous stimulus, such as, "Sort these cards in a way that makes sense to you," creating, in a sense, a cognitive map of how the client organizes that information (Peterson, 1998).

While card sorts are by nature a theoretical (Osborn et al., 2016), they do work well within CIP theory. Specifically, card sorts can be used to explore and enhance each area of the pyramid of information processing domains. Card sorts are not limited to occupational titles, but could contain self-knowledge descriptors such as interests, values, or skills. Decision-making styles, with humorous names such as St. Peter Perfectus and Freddy the Fence (Donald & Carlisle, 1983) could be placed on cards and sorted by clients.

Using Card Sorts in Career Problem Solving and Decision-Making: A CIP Theory-Based Approach

As an assessment, card sorts, used by a skillful practitioner, can reveal a client's world-of-work knowledge, knowledge of occupations under consideration, career decision-making styles and strategies, tentative career goals, personal and occupational identity, vocational maturity, negative thinking (Osborn, et al., 2016), and even faculty assumptions about self or options (Lent, 2020) that may interfere with career problem solving and decision-making. Further, as an intervention, a card-sort procedure can assist individuals in identifying high-priority occupations for consideration and exploration as well as salient factors undergirding one's career choice. Ways in which card sorts can be incorporated into the career problem solving and decision-making process employing a CIP theory framework, i.e., the CASVE cycle, are described as follows.

Communication. In the Communication phase, clients state their career problem and reveal the complexity of their life circumstances surrounding it. In some cases, clients complete the *Career State Inventory* (CSI: Leierer et al., 2022) which can reveal their career decision state (CDS) in terms of *certainty*, which consists of the Occupations Alternative Question (OAQ; Slaney et al., 1994), *satisfaction* with their level of certainty, and *clarity*, three items related to self-efficacy and confidence in career decision-making. See Chapter 8 for more detail on the CSI. The client's CSI responses can provide guidance as to how best to integrate a card sort into the CASVE cycle phases. If clients are in a severely confused CDS, as indicated by no first choice of options listed in the OAQ, or left blank, dissatisfied with their options, and a clear lack of clarity, practitioners may choose to use something similar to what is described as a *Vocational Card Sort* mapping task (VCS; Peterson, 1998). The VCS may be most useful in the Analysis phase to better understand how clients view their self and options knowledge and the relationship between the two. More detail on the VCS mapping task is provided in Appendix I. Clients in a relatively high CDS may use the more traditional card-sort process which entails sorting a deck of cards with occupational titles into piles of "might choose," "would not choose," and "no opinion" (Lent, 2020; Slaney, et al., 1994) as part of the CASVE cycle's Synthesis phase.

Analysis. As noted in Chapter 2, the CASVE cycle's Analysis phase is concerned with better understanding a client's pyramid, including how clients relate self-knowledge with options knowledge to better understand their personal characteristics in relation to occupations or other options they are considering. Persons may also clarify how they typically approach problem solving and decision-making. This review of self-knowledge and options knowledge at the base

of the Pyramid of Information Processing domains helps clients prepare for formulating and identifying plausible career options in the Synthesis phase. Clients who present in a high state of confusion, as revealed by responses to the CSI and verbal self-disclosures in the Communication phase, may benefit from a less structured approach to the cart sort process, similar to the Vocational Card Sort (VCS; Peterson, 1998) described in Appendix I. The VCS as a mapping task can be a helpful first step in addressing a severely confused career decision state.

Synthesis. The task of the Synthesis phase is to first formulate a wide variety of potential career options, maybe up to 20 or more, to consider for further career exploration (referred to as Synthesis-Elaboration), and then to reduce the list to a select 3 to 5 for further in-depth exploration in the subsequent Valuing phase (referred to as Synthesis-Crystallization). Assuming a client is not in a high state of confusion as noted above, the traditional card-sort procedure employing 54 – 180 cards can be an effective intervention in beginning Synthesis-Elaboration by sorting cards into "would choose" for further consideration, "might choose," "would not choose," and "don't know this occupation." Having clients "talk aloud" revealing all thoughts and feelings while sorting can reveal vitally important aspects of their lives, work experience, and career problem, such as interests, familiarity with an occupation, values, prestige, capabilities, levels of career aspiration, life goals, and relationship issues. Along with the card sort occupations, occupations generated by an interest inventory, e.g., the Self-Directed Search, a computer guidance system, e.g., Focus2, can be added to the list of occupations in the "would choose" and "might choose" piles. Finally. additional occupations included on the list may stem from life and work experience, family members, friends, significant others and teachers/mentors. Each option in the completed list should then be reviewed in occupational literature, on-line research, discussions with friends and relatives, interviewing job incumbents, and job shadowing to find out more about each occupation. Some cards obtained from publishers have useful information printed on the back of the card.

Following Synthesis-Elaboration, Synthesis-Crystallization entails a winnowing process to reduce the list of possible options to 3 to 5 highest priority options. This process involves the use of multiple criteria often revealed in the think-aloud component of the card sort procedure. Issues that come into play include fears, doubts, aptitudes and abilities, relationship issues, financial constraints, employment opportunity, perceived disabilities, prior work history, familiarity with occupation, prestige factors, desired lifestyle, and life goals. Each option is discussed with a rationale for deciding whether to keep or to eliminate it from the list. Sometimes comparing the final 3 to 5 options with the occupations in the "like me" pile generated in the sorting process helps to validate where these high-priority occupations belong in one's personal world-of-work schema.

Valuing. The task of this phase is to reduce the list of 3 to 5 high-priority occupations identified in Synthesis-Crystallization. While the client may have identified a first and second choice, the goal to have a list of acceptable alternatives, any of which could be considered in the future or replaced by more attractive options identified through subsequent uses of the CASVE cycle. This phase entails asking for each option, what's in it for me? What's in it for my significant others? What's in it for my cultural group or society? And, what meanings will I derive from this work? How will these options help me design my future career path? The personal information revealed in the card sort think-aloud procedures and subsequent discussions often bear on this task.

Execution. This phase involves formulating a plan to implement the first choice identified above in the Valuing phase. In formulating a plan, the personal information revealed in card-sort procedures comes into play again when one considers education, training, costs and risks to self and significant others. Using a card sort early in the CASVE cycle process can help the client become aware of key issues and strategies for coping with them, leading to a smoother process when they take steps to implement their primary choice. Without the card sorts, there is a greater risk of new and vital information and considerations emerging at this later phase of the CASVE cycle which may necessitate cycling back to Valuing or even Synthesis to reconsider their options.

Benefits and Drawbacks of Card Sorts

Card sorts present many benefits, including low cost, an alternative for those who do not want to complete an online or paper/pencil inventory (although some virtual card sorting tasks exist, e.g., Osborn, 2022), results that are unique for each client, creation of a springboard for next steps and a creative tool for career practitioners. The card-sort procedures can reveal important information regarding each domain of the Pyramid including self-knowledge, options knowledge, decision-making proclivities and styles, as well as self-awareness and self-confidence as a career problem solver and decision maker. Clients reveal aspects of themselves that are important to understanding and solving a presenting career problem. The card sort process as well as the outcome (the actual cards in piles) provide an alternative or even a complement to paper and pencil or computerized interest in arriving at plausible career options. Card sorts also allow for "sort talk," which are verbalizations that occur while the client is sorting, as well as processing after the sorting with questions that are more personalized to the individual. For example, themes might emerge, such as fears, family expectations, or Holland types, which in turn stimulate further discussion of factors that may affect their successful navigation of the CASVE cycle. In addition, cards could be re-sorted after the initial sort to provide a different perspective, such as asking the person to re-sort the cards from the perspective of a significant other, or if there were no barriers impacting their decision-making (Osborn et al., 2016).

Drawbacks to using card sorts include lack of psychometric information, difficulty in interpretation, and lack of an automatically generated report the client can take with them, unless the card sort is an on-line one (Osborn, 2022; Osborn & Bethell, 2009). Finally, as with any projective or constructed response assessment device, clients must fully engage the task to profit from it, and a practitioner must be prepared for unanticipated client reactions to it. Nevertheless, the added effort on the part of both the client and the practitioner is rewarded by a deeper and more thorough processing of important information in career problem solving and decision-making.

Using Online Portfolios in Career Assessment[51]

Popular online or E-portfolio tools include website builders, blogs, Adobe Creative Cloud

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[51] Kennelly, E., Osborn, D. S., Reardon, R. C., & Shetty, B. (2016). Career ePortfolio Completion and Student Interviewing Skills. *International Journal of ePortfolio*, *6 (2)*, 117–125. http://www.theijep.com/pdf/IJEP207.pdf and Lumsden, J. A., Pinataro, C. M., Baltuch, A. L., & Reardon, R. C. (2009-2010). Assessing career skills and competencies with an electronic portfolio. *Career Planning & Adult Development Journal, 25*(4), 126-137 and

products, Portfolium, and even some Career Management Systems (CMS) which have developed online portfolios as part of their product suite. Online portfolios can be used to highlight relevant coursework, achievements, projects, and experiences (paid or unpaid) that demonstrate competency and skill development for a specific career field, job, or industry (Lumsden et al, 2009; Winchell, 2018).

CIP Theory and the Use of Online Portfolios

Another major benefit of developing and maintaining an online portfolio is its ability to represent aspects of the pyramid of information processing domains especially self-knowledge and options knowledge. Effective online portfolios can be used to demonstrate clarity in values, interests, and skills through interactive, creative, and structured methods of visually presenting examples of real work and course/project deliverables. Development of an e-portfolio may also help users clarify options knowledge, as they highlight skills, experiences, and other activities that can help them demonstrate their fit with particular occupational and employment options. In academic settings, learning portfolios have been used as a "reflective process" to document, guide, and advance learning over time which promotes metacognition or an awareness of one's own learning (Moretti & Giovannini, 2011; Reardon et al., 2005).

Minimal research exists that sheds light on the degree to which students learn and develop throughout the construction and utilization of an online career portfolio (Ring et al., 2017). However, career practitioners can facilitate career decision-making conversations using CIP theory as a framework to assist clients in clarifying self and options knowledge in a way that will enable them to better articulate this information within an online portfolio. To effectively prepare an online portfolio, career decision-makers and job hunters must clarify their self-knowledge, i.e., values, interests, skills, as well as their knowledge of occupations in order to target specific jobs within particular industry settings.

Evaluating the Quality of Career Assessments

Career assessment measures range in quality from reliable and valid to unreliable and invalid (Osborn et al., 2011; Sampson & Makela, 2014; Sampson et al., 2020; Stolz & Barkley, 2019). Reliability refers to evidence of the consistency of the measure, whereas validity refers to evidence that the test measures what it is designed to measure. Quality career assessments provide evidence of the reliability and validity of the measure. Questionable career assessments may be well developed but lack evidence of quality, or the measure may simply be poorly developed. A lack of documentation of the quality of career assessments delivered on the Internet appears to be a particularly serious problem (Barak, 2003; Sampson et. al., 2018). The use of questionable assessments with persons may negate the potential contributions of career assessment to career choice described previously. Helping professionals who use questionable assessments should be mindful of the potential for violating assessment sections of the NCDA (2015) ethical codes, such as ethical standard E.11 which states that "career professionals do not use data or results from assessments that are obsolete or outdated" (p. 15).

Reardon, R., Lumsden, J., & Meyer, K. (2005). Developing an e-portfolio program: Providing a comprehensive tool for student development, reflection, and integration. *NASPA Journal, 42*(3), 368-380 and Reardon, R. C., & Hartley, S. (2007). Program evaluation of e-portfolios. In J. Garis and J. Dalton (Eds.), *Emerging student e-Portfolios: Opportunities for student affairs* (pp. 83-97). A New Directions for Student Services Sourcebook. San Franscisco: Jossey-Bass.

General standards governing quality development and use of assessments have been established by the American Educational Research Association, American Psychological Association, and National Council on Measurement in Education (2014), the Joint Committee on Testing Practices (2004), and the Association for Assessment in Counseling (2003). Career assessment standards were established by the National Career Development Association and the Association for Assessment in Counseling and Education (2010), and multicultural assessment standards were established by the Association for Assessment in Counseling and Education (2012). Hansen (2020) stressed the importance of attending to cultural and contextual issues and how these may impact career assessment results.

Promoting Effective Use of Career Assessments

The four-step model for practitioner intervention strategies presented earlier in this chapter can be used to assist persons in making effective use of career assessments. The four steps of the model included (1) understanding, (2) recommending, (3) orienting, and (4) follow-up (Sampson, 2008). Osborn and Zunker (2016) developed a cyclical and continuous model for using assessment results in career counseling that includes analyzing needs, establishing purpose, determining instruments, utilizing results, and making a decision about work or training/education. The bottom line of these approaches is that they avoid a test-and-tell process, where a practitioner gives a "test" that "tells" a person what option they should pursue. The decision to use a career assessment should come about as the client's goals for the outcome of the career conversations become clear (e.g., "I want to see what might fit my interests," or "I want to learn more about my skills").

As previously discussed in Chapter 7, the three levels of service delivery in CIP theory are self-help, brief staff-assisted, and individual case-managed services.

1. If a person shows *high* readiness for career choice during the understanding step (where screening occurs), the use of career assessments can continue in a self-help mode, with orientation and follow-up provided if requested by the person.

2. If the understanding step (the screening process) indicates that the person has *moderate* readiness for career choice, then a brief staff-assisted intervention is likely needed, with an orientation provided prior to the use of career assessments and follow-up provided after assessments have been completed.

3. If the understanding step (the screening process) indicates that the person has *low* readiness for career choice, then an individual case-managed intervention is likely needed, and a recurring cycle of orientation to and follow-up after each resource or resource feature is provided until the person's needs are met or an appropriate referral is made for other services.

In self-help services, self-assessments are used. In brief staff-assisted and individual case-managed services, practitioner-assisted assessments are used, although self-assessments, such as the Standard SDS (Holland & Messer, 2017a), can also be used. Strategies differ for promoting the effective use of self-assessment and practitioner-assisted assessment and are described in the following sections.

Self-Assessment in Self-Help Services

In self-assessment, the person, the practitioner, or both have decided that a self-help intervention is appropriate. The understanding, recommending, and orienting functions are typically embedded in the instructions for the self-assessment measure being used (see the Standard SDS [Holland & Messer, 2017a]). Follow-up to the use of self-assessment can also be provided within the measure (see the recommended follow-up activities for the Standard SDS in Holland & Messer, 2017b).

Practitioner-Assisted Assessment in Brief Staff-Assisted and Individual Case-Managed Services

In practitioner-assisted assessment, the understanding step (including screening) has already occurred because a decision has been made that some assistance with assessment is needed. Recommending and orienting begins with the development of the Individual Learning Plan (ILP), as described in Chapter 7. An assessment is listed as one of the ILP activities; and the purpose/outcome of completing the assessment, the estimated completion time, and the way in which completing the assessment relates to ILP goals are briefly discussed. Pacing occurs in the speed at which assessments, along with other activities, are completed on the ILP. Follow-up occurs when the practitioner reviews assessment results with the person and establishes a plan for using this information in career choice. For a low-readiness person, the practitioner needs to take care that negative thoughts have not interfered with the person's capacity to respond to individual test items. For example, negative thoughts about self can limit responses to inventories of interests or skills. Practitioners can identify potential negative thoughts by asking persons to verbalize the thought process they used to respond to individual items that reflect a perceived lack of interest or skill.

Career Information[52]

Career information is typically used to help persons enhance their knowledge of occupational, educational, training, employment, and leisure options. The Alliance of Career Resource Professionals (2016a) noted that "Career information comprises educational, occupational, industry, financial aid, job search, and related information for career development" (p. 2). This section begins with an exploration of the potential contributions career information can make to persons' career choices. The section then explains a schema for organizing career information (including examples), identifies available career information, reviews quality issues, and reviews a model for promoting effective use of career information. See Chapter 18 for additional content on the design, implementation, and management of career information resources.

Potential Contributions of Career Information to Career Choice

Career information, like career assessment, has the potential to help persons progress through the CASVE cycle. The following section examines seven potential contributions of career information to career choice.

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[52] Content in this section was used or adapted from Sampson et al., (2004) and Sampson (2008). Used or adapted with permission.

Enhancing Awareness of Career Problems and Promoting the Motivation to Change

Exposure to career information, such as a description of a new high-wage occupation, the decline of job options in a field of interest, or general employment opportunities in a geographic location, can help persons become aware that they may have a career problem (i.e., gap) that needs attention. The possibility of earning more money or living in a nicer location is an example of such a gap (the Communication phase of the CASVE cycle). This type of career information might be accessed by reading a magazine article, accessing a website, viewing a presentation on television, seeing a discussion on social media, or listening to information provided by a significant other.

Clarifying Self-Knowledge

Career information can be used to clarify self-knowledge by helping persons reconsider their values, interests, skills, and employment preferences based on what they have learned from occupational, educational, and employment information (the Analysis-self phase of the CASVE cycle). For example, after using various assessment resources to gain an initial clarification of values, interests, skills, and employment preferences, persons can use occupational information to identify opportunities that have the potential to satisfy their values. As a result of using occupational information, persons may discover that what they thought they wanted (such as being a leader with substantial authority over others) was no longer desirable. The doubts that now exist can motivate persons to return to the assessment process to further clarify their self-knowledge. Persons can now respond to assessments with a more differentiated view of what they want or do not want.

Motivating Persons to Enhance Knowledge of Options

Career information can be used to increase a person's motivation for career exploration by increasing their awareness of the nature of available options (the Analysis-options phase of the CASVE cycle). Involving at-risk youth in a university-based summer program to heighten their awareness of occupational alternatives in math and science is one example of a programmatic approach to helping persons acquire occupational awareness. An employed adult who reads or learns about emerging occupations in a business magazine, or while scrolling through a social media site or webpage is an example of a serendipitous approach to promoting awareness. One learning outcome of this use of career information is to motivate the person to invest the time necessary to engage in further career problem solving and decision-making.

Preparing for Assessments that Generate Career Options

Career information can be used before the completion of career assessments to better prepare persons to respond thoughtfully to assessments that ultimately generate lists of career options (the Synthesis-Elaboration phase of the CASVE cycle). Many inventories and career information delivery systems generate lists of occupations or programs of study. Some persons have difficulty in confidently responding to test items or selecting and rating computer search criteria. By reading the description of one or two occupations before using an assessment, the person has a concrete example to reflect on regarding personal characteristics related to occupations. This is analogous to warming up the engine of a car in the winter before driving or stretching before exercising.

Narrowing Career Options after Generating Career Options

Career information can be used to narrow career options after receiving lists of occupations, programs of study, or educational institutions from various assessments or career information delivery systems (the Synthesis-Crystallization phase of the CASVE cycle). This use of information can help persons decide which alternatives merit further consideration. One potential problem with Synthesis-Elaboration is that persons can become easily overwhelmed with the number of options presented by assessments and computer systems. Becoming overwhelmed may decrease persons' motivation to continue with career exploration. One strategy for dealing with this problem is to use a small number of information topics to rapidly sort through options, discarding inappropriate alternatives and retaining potentially satisfactory options. One learning outcome of this use of career information is to increase the motivation necessary to complete a more thorough analysis of occupations that have been identified. Another learning outcome is to help the person feel more confident that potentially appropriate options were not missed, which could be achieved through conducting a few more searches until it is clear that the same options keep emerging with no new additions that seem interesting to the individual.

Evaluating Narrowed Options

After the person has identified three to five options for more detailed analysis, career information can be reconsidered, or added to, so that finer distinctions can be made among potentially appealing alternatives (the Valuing phase of the CASVE cycle). This careful review of career information to support evaluation of the costs and benefits of narrowed options can help persons develop more confidence in their ability to prioritize their choices. It is possible that after learning further details about occupations, educational institutions, training providers, or employers, persons may lose confidence in the appropriateness of the options they are considering or in the assessment responses or computer search criteria they used to generate options. In this case, the person can be encouraged to return to Analysis-self. This is an example of career problem solving and decision-making being an iterative or recursive process.

Preparing for Choice Implementation

Career information can help persons prepare to implement their career choice, whether it is job seeking, an educational pursuit, or retirement (the Execution phase of the CASVE cycle). For example, career information can provide a foundation for subsequent review of employer recruitment materials. By having general occupational information on work tasks, income, working conditions, and so forth, persons are better able to evaluate how a particular employer may, or may not, vary from the norm. Career information can also help persons prepare to evaluate job offers in the same manner.

Summary of Career Assessment and Information Contributions to the CASVE Cycle

Table 9.2 Summarizes the potential contributions of career assessment and career information to the phases of the CASVE Cycle.

Table 9.2

Relating the CASVE Cycle to the Potential Contributions of Career Assessment and Career Information

Phases of the CASVE Cycle	Contributions of Career Assessment	Contributions of Career Information
Communication	Enhancing Awareness of Career Problems and Promoting the Motivation to Change	Enhancing Awareness of Career Problems and Promoting the Motivation to Change
Analysis – Self-Knowledge	Motivating Persons to Clarify Knowledge of Self	
Analysis – Options-Knowledge	Motivating Persons to Enhance Knowledge of the World-of-Work	Motivating Persons to Enhance Knowledge of Options
Synthesis – Elaboration	Generating Career Options	Preparing for Assessments that Generate Career Options
Synthesis – Crystallization	Narrowing Career Options After Generating Career Options	Narrowing Career Options After Generating Career Options
Valuing	Evaluating Narrowed Options	Evaluating Narrowed Options
Execution		Preparing for Implementation of Choice

A Schema for Organizing Career Information

A vast amount of career information is available to persons seeking to make career choices (See Chapter 18). Table 9.3 provides a schema for organizing career information and specific examples for occupational, educational, training, and employment information.

Table 9.3

A Schema for Organizing Career Information

Occupational Information Elements

Nature of the Work

- Abilities/skills of typical workers
- Aptitudes of typical workers
- Interests of typical workers
- Overview/definition
- Pros & cons of the work

- Temperaments of typical workers
- Tools & equipment used
- Values of typical workers
- Work location
- Work tasks/activities
- Working conditions/environment
- Classification data codes (O*NET, SOC)
- Related civilian occupations
- Related military occupations
- Sources of additional information

Nature of Employment

- Earnings/wages
- Employment statistics
- Fringe benefits
- Future employment outlook
- Job security
- Opportunities for advancement
- Typical job titles

Requirements for Employment

- Educational/training/apprenticeship
- Licensing/certification

Educational Information Elements

Nature of the Education

- Alternative credit options
- Apprenticeship opportunities
- Contact for further information
- Degree/certificate requirements
- Degrees/certificates offered
- Foreign study options
- Honors courses/program
- Military training opportunities
- Employment of graduates
- Programs of study/majors

Nature of the Institution

- Academic calendar
- Accreditation
- Activities & sports
- Community size/type
- Degree/certificate completion time
- Degree/certificate completion
- Enrollment
- Faculty characteristics
- Housing/residence

- Institutional affiliation/control
- Pros & cons of the institution
- Student body characteristics
- Student services
- Type of institution

Admissions
- Admissions process
- Admissions selectivity
- Costs
- Entrance requirements
- Financial aid
- Scholarships

Training Information Elements
Nature of the Training
- Certification available
- Length of training
- Knowledge obtained
- Skills obtained
- Training content
- Training method (On-the-job, Apprenticeship, etc.)

Nature of the Training Provider
- Accreditation
- Location of training
- Provider contact information

Admissions
- Application process
- Costs
- Financial aid
- Scholarships
- Training prerequisites

Employment Information Elements
Sector
- Employer types
- Employment statistics
- Future outlook
- Size

Industry
- Employment statistics
- Future outlook
- Size
- Sources of additional information
- Typical employers

- Typical occupations

Employer
- Advancement opportunities
- Employment statistics
- Fringe benefits
- Human resource development offerings
- Location(s)
- Occupations employed
- Recent employer financial performance
- Sector
- Size
- Sources of additional information
- Training policy and opportunities

Position
- Contact person
- Compatibility with co-workers
- Duties
- Educational qualifications
- Experience qualifications
- Fringe benefits
- Licensure/certification
- Local environment
- Location
- Potential use of values, interests, & skills
- Pros & cons of the position
- Recent employer financial performance
- Relocation services
- Salary
- Schedule, hours worked, and travel required
- Security
- Training provided

Available Career Information

Career information is available in a variety of media and can be categorized as noninteractive or interactive.

Noninteractive Career Information

Information delivered through noninteractive media is generally linear in nature. The structure of the medium influences the selection and sequencing of the information presented. In comparison with interactive media, noninteractive media generally have the advantages of broader and more detailed topic coverage and lower cost; the disadvantage is a reduced potential for motivating further exploratory behavior. The similarities and differences between noninteractive and interactive media presented in this chapter are generalizations, which have the

limitation of not applying in all circumstances. This discussion of similarities and differences is intended to provide a frame of reference for comparing and contrasting various types of media. Table 9.4 provides examples of noninteractive career information media.

Table 9.4

Noninteractive Career Information Media

Medium	Examples
Print	Books, pamphlets, brochures, and files physically available in libraries, career centers, and employment/workforce centers, as well as electronically available as PDF and HTML files downloaded from websites, social media sites, apps, and blogs
Audio	Commercial and user-produced audio programs streamed on websites and podcasts
Video	Commercial and user-produced videos streamed on websites, social media sites, apps, and vlogs
Public Presentations	Speeches and panel discussions with limited audience participation
Assessment	Paper-and-pencil, and website-based measures of values, interests, and skills

Interactive Career Information

Interactive media are generally nonlinear in nature. The person maintains at least partial control over the selection and sequencing of information. In comparison with noninteractive media, interactive media have the advantage of enhancing motivation for career exploration and the disadvantages of typically higher cost and less detailed topic coverage. Table 9.5 provides examples of interactive career information media

Table 9.5

Interactive Career Information Media

Medium	Examples
Websites or Apps	Employer, job posting systems, or in occupational information websites
Career Information Delivery Systems (CIDS)	State or national-based information systems (with or without assessments and instruction)
Card Sorts	Self or practitioner-guided assessment of values, interests, and skills

Medium	Examples
Structured information interview	Interviewing a currently employed worker at the job site or at a career day or career fair
Role playing or games	Classroom or group career guidance activity that allows students to try out career and life options
Instruction	Classroom activities that allow individuals to try out various work behaviors, e.g., accounting
Synthetic work environment	A flight training simulator for pilots
Direct observation	Shadowing a worker for a day to observe typical work tasks, or taking field trips to places of employment
Direct exploration	Volunteer work, cooperative education, internships, work-study programs, or part-time employment
Social interaction	Conversations with family members, relatives, peers, school personnel, and acquaintances about various career opportunities

Since the publication of the first book on CIP theory in 1991, one of the greatest changes in the delivery of career information has been the use of websites for dissemination of information. Websites that deliver a broad diversity of career information, including O*NET (U. S. Department of Labor, 2021; http://online.onetcenter.org/), careeronestop (U. S. Department of Labor, 2021; https://www.careeronestop.org/Toolkit/toolkit.aspx), the *Occupational Outlook Handbook* (Bureau of Labor Statistics, 2021; http://www.bls.gov/oco/) and Internet-based sites for career planning (NCDA, 2021; https://ncda.org/aws/NCDA/pt/sp/resources). More targeted career information may be found through specialty sites, such as professional associations for particular occupations, groups on social media sites (e.g., LinkedIn), career field specific sites (e.g., careers in nonprofits). Regardless of the source, practitioners play a key role in helping clients evaluate and access quality career information (Epstein & Lenz, 2008).

Evaluating the Quality of Career Information

Several characteristics exist for quality career information. "Career information should be accurate, current, developmentally appropriate, relevant, specific, understandable, and unbiased (Alliance of Career Resource Professionals, 2016a, p. 2). Specific standards related to career information development and ethical use are detailed in the standards handbook of the Alliance of Career Resource Professionals (2016b). Career information standards from the National Career Development Association (1991; 1992a; 1992b), emphasize the importance of information accuracy, comprehensiveness, currency, and lack of bias. These characteristics are echoed by Bimrose and Barnes (2011) who noted that labor market information should be reliable, comprehensive, current, and impartial. Labor market sources, such as the US Bureau of Labor Statistics, provide detailed information on how they determine employment projections. see more at: https://www.bls.gov/emp/

Sampson et al. (2018) approached the concept of career information quality from the perspective of validity, including the following definition and schema.

> Career information validity concerns the accumulated evidence that an information source is *comprehensive, accurate, and relevant* for the decision being made, as well as being *understandable* to the decision maker. *Comprehensiveness* of career information concerns the accumulated evidence that the data presented includes all of the relevant topics necessary for making an informed decision by persons at various developmental stages. *Accuracy* of career information concerns the accumulated evidence that the data presented are current, credible, and presented in an impartial manner. The source gathering and presenting the information should be made clear so that the reader can be made aware of any potential impartiality. *Relevancy* for the decision being made is the accumulated evidence that the data presented contributes to a specific type of decision, such as using employment projection data in making education and training decisions. *Understandable* to the decision maker is the accumulated evidence that the data are presented in a way that is appropriate for the developmental characteristics of the learner. (Sampson et al., 2018, p. 123).

Promoting Effective Use of Career Information

As stated previously in this chapter, the use of career information in career services is a learning event (Peterson et al., 1991; Sampson et al., 2004). To promote learning, persons need to be able to appropriately select, sequence, locate, and use career information (Sampson, 1999; 2008). *Selecting* career information involves choosing information that is related to specific needs, such as the needs reflected in the goals and purpose/outcome statement on an ILP. *Sequencing* career information involves ordering information resources to maximize the potential for learning. For example, reading general descriptions of occupations helps persons to prepare for an information interview or a job interview, as sequenced on a resource guide or an ILP. It is important to note that not all career information needs to be sequenced. Sequencing is only recommended when ordering enhances learning. *Locating* career information involves acquiring the career information that has been selected to meet a person's needs. *Using* career information involves reading, listening to, or viewing the information as suggested by the instructions included with the information or by following the recommendations of a practitioner. For example, comprehensive instructions for use are often included in career information delivery systems. The process of selecting, sequencing, locating, and using career information are a part of the *orientation* function described earlier in the section on career assessment. Strategies differ for promoting the effective selection, location, sequencing, and use of career information, in self-help and practitioner-mediated services (brief staff-assisted and individual case-managed) and are described below. Strategies also differ for understanding, recommending, orientation, and follow-up, which are also described in the next section.

Career Information in Self-Help Services

The following information describes selecting, sequencing, locating, and using career information, as well as understanding, recommending, orientating, and follow-up in the context of self-help services.

- *Selecting Career Information*. The practitioner can facilitate a person's appropriate selection of career information by making recommendations for matching career information resources with specific needs that are included on resource guides (See Chapter 7), in a career library index, or on a website.

- *Sequencing Career Information*. If necessary, the practitioner can provide recommendations on module sheets/resource guides for sequencing the person's selected career information.

- *Locating Career Information*. The practitioner can help the person locate selected career information by use of signage identifying resource locations in a career library, an index of career resources that includes location, a map of a career library showing resource locations, and links on a website.

- *Using Career Information*. Recommendations for using career information can be included as part of the information resource itself.

- *Understanding, Recommending, Orientating, and Follow-Up*. In self-help services, the individual, the practitioner, or both have decided that a self-help intervention is appropriate (the *understanding*/screening function). The *recommending* and *orientating* aspects for career information use are typically embedded in the instructions for the information being used (see the instructions typically included in a career information delivery system). *Follow-up* to the use of career information can also be provided within the information resource (see the recommended follow-up activities for some career information delivery systems).

Career Information in Brief Staff-Assisted and Individual Case-Managed Services

The following information describes selecting, sequencing, locating, and using career information, as well as understanding, recommending, orientating, and follow-up in the context of brief staff-assisted services and individual case-managed services.

- *Selecting Career Information*. The practitioner can make recommendations and document them on the ILP to facilitate the person's appropriate selection of career information.

- *Sequencing and Pacing Career Information*. Appropriate sequencing of career information, if necessary, can be included using the priority feature of the ILP. Pacing can be indicated by the practitioner in establishing client expectations for how quickly information use is completed.

- *Locating Career Information*. The practitioner can help the person locate career information by modeling information-seeking behavior, showing the person how to use signage, indexes, maps, and websites.

- *Using Career Information*. The practitioner can facilitate the person's use of career information by briefly reviewing usage instructions or demonstrating the use of an information resource. As the practitioner observes information use by the person, positive reinforcement can be provided to further enhance the motivation of the person to increase use of the resource.

- *Understanding, Recommending, Orientating, and Follow-Up*. As in career assessment, *understanding* (including screening) has already occurred because a decision has been

made that some assistance with information use is needed. *Recommending* and *orienting* begins with the development of the ILP. Career information is listed as one of the ILP activities, and the purpose/outcome of using the information, the estimated completion time, and the way in which the information relates to ILP goals are briefly documented. *Follow-up* occurs when the practitioner talks with the client to clarify the nature of the person's learning experience and a plan is established for using what has been learned in information use towards making a career choice. Niles and Bowlsbey (2022) noted that a key role for practitioners is ensuring that clients make meaningful use of the information obtained. For a client with low-readiness for career choice, the practitioner must also take care that negative thoughts have not interfered with the person's capacity to learn. For example, negative thoughts about self can limit a person's motivation to use information resources. Negative thoughts can also cause persons to perceive that they will not be successful with job tasks associated with an occupation or learning tasks associated with education or training. The practitioner can identify potential negative thoughts by asking persons to verbalize the thought process they are using as they read career information.

Table 9.6

Relating the Understanding, Recommending, Orientation and Follow-Up Model to Selecting, Locating, Sequencing, Pacing, and Using Career Information

Understanding (Includes screening discussed in Chapter 7)

Recommending
- Selecting Career Information
- Sequencing Career Information
- Pacing Career Information

Orientation
- Locating Career Information
- Using Career Information

Follow-Up

Additional Considerations

Several additional considerations can contribute to persons effective use of career information (Peterson et al., 1991). The following section includes brief recommendations on readiness for career choice, decidedness, motivation, verbal aptitude, decision-making style, and balance of presentation. These recommendations represent generalizations that may not be true in a particular circumstance. Practitioners can use these recommendations to suggest how to help persons use career information effectively.

Readiness for Career Choice. Persons with higher readiness for career choice need less assistance from a practitioner to use career information, while persons with lower readiness need more assistance.

Decidedness. Persons who are decided and undecided need less assistance from a practitioner to use career information, while persons who are indecisive generally need more assistance.

Motivation. Persons who are highly motivated to engage in career choice need less assistance from a practitioner to use career information, while poorly motivated clients need more assistance. Using the features of the ILP, as well as modeling and reinforcement of information-seeking behaviors, can enhance motivation for career choice.

Verbal Aptitude. Persons with higher verbal aptitude need less assistance from a practitioner to use career information, while persons with lower verbal aptitude may need more assistance. Persons with higher verbal aptitude can make better use of information resources requiring a higher reading comprehension level, while persons with lower verbal aptitude need resources designed for lower reading levels.

Decision-Making Style. Persons can have a spontaneous to systematic approach to information gathering and an external to internal approach to information processing (Johnson, 1978). For example, a person with a spontaneous-external decision-making style might benefit from a structured interview with a currently employed person, whereas an individual with a systematic-internal style may prefer to work with self-study materials before engaging in interviews.

Balance of Presentation. Persons need access to negative career information describing options as well as positive career information to maximize the potential for learning (Reardon, 1984). Information that is overly positive does not facilitate critical thinking about the costs and benefits of career options that takes place in the Valuing phase of the CASVE cycle.

Career Instruction[53]

As we stated in Chapter 1, instruction is also used to help persons clarify their knowledge of self, knowledge of their options, and knowledge of the decision-making process. In this way instruction is similar to career assessment and career information described previously, although several differences also exist. In terms of differences, instruction integrates several sources of data in a meaningful sequence designed to achieve a specific learning outcome. Instruction also includes some type of evaluation of how well persons have mastered the intended learning objectives. In comparison with career assessment and career information, instruction is a less commonly available type of career resource. Instruction most commonly occurs in K-12 schools as part of instruction in specific subjects or in higher education as credit and non-credit courses (Reardon, et al., 2021).

Since instruction typically includes career assessment and information, the potential contributions of assessment and information to career choice described previously apply to instruction as well. By its nature, instruction is practitioner-mediated for both assessment and information. A comprehensive description of the effects of college career courses on learner outputs and outcomes in higher education is provided by Folsom and Reardon (2000).

Screening occurs when the student decides (sometimes with input from a staff member) that instruction is needed and registers for a course. Depending on the institution's policies,

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[53] Content in this section was used or adapted from Sampson et al., (2004). Used or adapted with permission.

instructor permission may be required to take the course and screening can be accomplished by admitting only students with moderate to low levels of readiness for career choice. Recommending occurs in the sequencing of instruction in the syllabus and in instructor feedback to the student. Orientation occurs as the nature, purpose, time commitment, and relationship to student goals of assignments are discussed in class. An ILP or similar performance contract can be used to help students keep track of class assignments (Dozier & Lenz, 2019; Reardon et al., 2022). Follow-up occurs as the instructor monitors student progress and feedback is provided on individual assignments.

Osborn (2016) provided a comprehensive description of instruction in undergraduate career development courses, beginning with evidence-based practice and continuing with the needs of undergraduate students and the use of active learning strategies in meeting those needs. Osborn also provided an analysis of typical course syllabi and course assignments. A career course syllabus and class presentations from Florida State University may be accessed at https://career.fsu.edu/students/plan-your-career/sds-3340-introduction-to-career-development.

Contribution of Assessment, Information, and Instruction to Career Interventions[54]

Chapter 7 of this book describes eight critical ingredients of effective career interventions. Four of these critical ingredients specifically relate to the content of this chapter and contribute to the overall effectiveness of career interventions. These ingredients include:

- *Assessment* – Practitioner provision of individualized interpretation of self-report assessments, including values clarification.

- *Information* – Provision of career information.

- *Psychoeducation* – Psychoeducation on the steps involved in arriving at a career choice and feedback on client career plans and decision-making strategies.

- *Writing* – Completion of workbooks and written exercises.

Chapter 9 Summary

This chapter described the planning and delivery of career resources. Examples of the use of the Pyramid of Information Processing Domains and the CASVE cycle with career assessment, information, and instruction were presented, as was differentiated service delivery. Career assessment was examined in terms of potential contributions to career choice, a schema for organizing assessments, available assessments, evaluation of quality, and promotion of effective use. Career information was examined in a similar way in terms of potential contributions, organizational schema, available information, evaluating quality, and promoting effective use. The chapter ends with an examination of instruction as a career resource.

Getting the Most Benefit from Reading Chapter 9

To effectively learn the material in this chapter, complete one or more of the following activities:

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[54] Content in this section was used or adapted from Sampson et al., (2020). Used or adapted with permission.

- Write down the similarities and differences among career assessment, career information, and career instruction.

- In your own words describe the potential contributions of career assessment and career information to career choice.

- Talk with a career practitioner about the range of career assessments they use in practice. Think about other assessment options, if any, that could be added.

- Complete and have interpreted by a career practitioner, 2-3 career assessments. Think how these assessments might have helped with your own career choice.

- Talk with a career practitioner about the strategies they use to help persons benefit from career assessment.

- Talk with a career practitioner about the range of career information they use in practice. Think about other information options, if any, that could be added.

- Use several career information sources and think how this information might have helped with your own career choice.

- Talk with a career practitioner about the strategies they use to help persons benefit from using career information.

- Talk with an instructor about the potential contributions their career course has for students. Review the syllabus for the course paying attention to assignments, assessments, and resources used.

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Appendix I
Vocational Card Sort Mapping Task

Continue on the following page.

From: *Cognitive Information Processing: Career Theory, Research, and Practice*, Chapter 9 (https://doi.org/10.33009/fsop_sampson1123.ch09).

Vocational Card Sort Mapping Task

The Vocational Card Sort (VCS; Peterson, 1998) mapping task may be used to assist clients in clarifying both self-knowledge and options knowledge and the relationship between them. The VCS consists of 36 cards with one occupation listed on each card. The cards represent the six domains of the Holland hexagon (Holland, 1997) with two occupations at each of three levels (Shahnasarian & Peterson, 1988) creating a 6 X 6 matrix.

Procedures

Clients first sort the cards into separate piles of related occupations (typically, 5 – 8), and then on a table, arrange the in relation to one another creating a personalized *schema* (Rummelhart & Ortony, 1976) or *architecture* (Anderson, 1983) of the world-of-work.

The client is then directed to identify which pile is most like them, which is their place in their world-of-work. A guided inquiry follows in which clients express orally why the pile is like them in terms of self-characteristics and occupational characteristics, and then replicates the process for each occupation in the pile.

1. "Sort this deck of 36 cards into piles of related occupations and talk aloud as you go through the process."

2. "Arrange the piles into a two-dimensional space." This step reveals ones "personal architecture" (Anderson, 1983) of the world-of-work.

3. "Label each pile." This step fosters a semantic network of occupations (Tulving, 1972) for further discussion and analysis.

4. "Identify the pile most like you." An individual draws a basic connection between occupational knowledge and self-knowledge.

5. "Describe each occupation in the 'like me' pile in terms of its attributes." An individual reveals their depth of knowledge of occupations in their sphere of occupations close to one's self.

6. "Identify piles that are most like your parental figures or other family members who played a significant role in your life. Individuals may reveal parent identification processes as well as family dynamics undergirding potential complexity of a presenting career problem in the prior Communication phase.

7. "Think back about the process you used to sort piles in Step #1 and talk about your selection of occupations into piles and how you chose the occupations in the "like me" pile. This step often reveals further understanding of their world-of-work and their place in it.

The VCS as a mapping task can be a helpful first step in addressing a severely confused career decision state. Clients are also encouraged to talk about cards in the would not choose or most unlike me pile (Osborn & Bethell, 2009). The talk-aloud process often provides information regarding the source of the confusion for further discussion and exploration. By completing the task, clients may gain confidence and a sense of accomplishment, and a feeling of progress toward making a career decision. In rare cases in which a client is reluctant,

uncooperative, or fails to perform the task even with practitioner encouragement and assistance, such behavior may signal cognitive, mental health or other issues that should be addressed before moving on to subsequent phases in the CASVE Cycle.

Following the use of the VCS, Holland's *Self-Directed Search* (SDS; Holland & Messer, 2017a) can be administered to provide an alternative map of the world-of-work through the RIASEC theory and their place in it through the 3-point Holland Code. The two models (Self as revealed by the VCS and Holland RIASEC code) can now be compared for commonalities and differences. Especially noteworthy is the similarity between the "like me" pile and the client's dominant interest domain indicated by their SDS summary code. A practitioner must be mindful that the RIASEC model and Holland codes are based on measured interests, whereas an individual personal model of the world-of-work as revealed in the VCS is based on the totality of life experience and accumulated occupational knowledge.

Finally, it should be noted that the 36 cards of the VCS were drawn from the 180 card *Occu-Sort* (Jones & DeVault, 1979) in which 6 cards represent each domain of Holland's RIASEC theory, and three levels within each domain. An array of cards is listed below for the development of a practitioner's own deck, but could be replaced by more recent, current occupations, which could represent the Holland types or could be focused in one area, such as types of "helping" occupations, if desired.

Travel Clerk	College Professor	Financial Manager	Merchandise Manager	Data Entry Specialist	Cashier
Sales Clerk	Insurance Sales Agent	Librarian	Lawyer	Meteorologist	Biologist
Actor	Chemist	Industrial Engineer Technician	Drama Teacher	Nuclear Engineer	Firefighter
Photographer	Elementary School Teacher	Supervisor of Computer Operations	Counselor	Graphic Designer	Personnel Manager
Physical Scientist	Payroll Administrator	Proofreader	Repair Technician	Cook	Construction Worker
Fish & Game Warden	Musician	Physician	Film Director	Social Worker	Illustrator

CHAPTER 10
CONNECTING CIP THEORY AND MENTAL HEALTH CONCERNS[55]

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This chapter examines the potential impact of mental health concerns on career problem solving and decision-making from the perspective of CIP theory. Research on CIP theory and career clients' mental health concerns suggests that recognition and integration of these issues during the career exploration and decision-making process are important considerations when

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[55] Portions of the content in this chapter were used or adapted from Sampson et al., (2004; 2020). Used or adapted with permission.

providing assistance (Hayden & Osborn, 2020; Sampson et al., 2020; Lenz et al., 2010). The chapter begins with an exploration of the intersection of mental health factors and career decision making, and continues with an examination of research findings related to CIP theory and mental health, CIP readiness dimensions related to mental health, CIP-based assessment and mental health, and integrated career and mental heath interventions. The chapter concludes with a summary and recommendations for getting the most benefit from reading the chapter.

Intersection of Mental Health Factors and Career Decision-Making

A variety of scholars have noted that a person's mental health status may often be impacted by career concerns (Gelso & Williams, 2022; Marks et al., 2021; Tang et al., 2021; Zunker, 2008). An individual's mental health status has the potential to interact with every area of the CIP pyramid and the CASVE cycle. Unaddressed, elevated levels of depression or anxiety or other mental health issues can likely impact and may impede the career decision-making and problem-solving process. In fact, both anxiety and depression have been associated with decision-making difficulties (Bishop & Gagne, 2018). People with higher anxiety are more likely to expect negative events to happen, and those with higher depression are less likely to believe that positive events will happen in the future (Muris & van der Heiden, 2006). In addition, decision-making and weighing of options appear to be influenced by one's internal state which is comprised of cognitions and emotions (Paulus & Yu, 2012).

Individuals who are experiencing and unable to control excessive depressive thoughts might engage in self-knowledge activities and endorse or choose descriptors that are influenced by their negative thinking, e.g., "I am not good at anything" or "I'm not interested in anything." Similarly, as they examine information about options, they might evaluate that information or its application to their self-knowledge with a negative bias, such as "I could never do that." As they proceed through the CASVE cycle, they may place more emphasis on negative cues or dismiss potential options for biased reasons. At the executive processing level, individuals with higher depressive symptoms demonstrated a preference for simpler approaches to decision-making and reported more uncertainty in their decision-making (Blanco et al., 2013), and the decision-making process can take longer (Lawlor et al., 2019; Murphy et al., 2001). The next section will discuss additional CIP theory-based research that further highlights the intersection of career concerns and mental health factors.

Selected CIP Theory Research Findings Related to Mental Health Factors

As alluded to in prior sections, the interaction of mental health factors with career concerns is well documented in research literature. For more than 20 years, CIP theory has developed a research base that informs the work of career practitioners in integrating career and mental health concerns. Saunders et al. (2000) provided evidence of the relationship between depression, negative career thinking, and career indecision. Dagenhart (2004) reported a significant positive relationship between Career Thoughts Inventory (CTI) scores and scores on the Beck Depression Inventory II (BDI-II; 2004). She stressed the importance of considering negative thinking and depressive tendencies when interpreting clients' interest inventory results. Walker and Peterson (2012) provided further support for the associations between career thoughts, indecision, and depression. Buzzetta et al. (2020) found significant relationships between meaning in life, negative career thoughts, and depression. In a study that involved clients seeking career assistance, Dieringer et al. (2017) found that specific aspects of negative

career thoughts, i.e., decision-making confusion and commitment anxiety, were associated with levels of depression. In addition, decision-making confusion accounted for a significant amount of variance in hopelessness.

In addition to depression, evidence suggests that career anxiety impacts decision-making and problem-solving in various ways (Marques, 2018; Pisarik et al., 2017; Xiao et al., 2014). As noted in Chapter 8, the Career Thoughts Inventory (CTI) includes the subscale of commitment anxiety. Specifically, commitment anxiety has been found to be associated with career tension (Finklea & Osborn, 2019). In addition, higher commitment anxiety levels have been significantly correlated with lower vocational identity, higher need for occupational information, and more barriers to choosing an occupation (Sampson et al., 1996b). These findings speak to the relationship of anxiety to specific elements of the career choice process.

A related and somewhat distinct aspect of anxiety is worry. Worry has been found to be associated with various CIP-related constructs (Hayden & Osborn, 2020). For example, worry was found to be significantly correlated with negative career thinking, specifically the dimensions of decision-making confusion and commitment anxiety. Worry was also related to readiness and its dimensions of clarity and certainty, and with the self-assessed cognitive information processing skills of self-knowledge, options knowledge, decision-making, and executive processing. Finally, worry was found to predict the degree of readiness for career decision-making, negative career thinking, and the application of requisite cognitive information processing skills.

Another factor that has been associated with difficulties in decision-making is neuroticism. Neuroticism has been defined as the tendency to experience negative emotions such as anxiety, sadness, fear, nervousness, embarrassment, guilt, and disgust (McCrae & Costa, 2010). Bullock-Yowell et al. (2015) found that neuroticism was associated with individuals' career decision state (i.e., readiness), specifically in relation to negative thinking. In a more recent study, using a shorter form of the NEO, Coleman et al. (2023) reported significant positive relationships between neuroticism and negative career thoughts, providing further support for the notion that individuals who exhibit negative behaviors and career thoughts may struggle with making career decisions.

A further consideration related to mental health factors involves individuals who have experienced trauma at some point in their lives. A number of authors have documented the relationship between trauma and the risk of experiencing mental health issues (Sweeney et al., 2018; Torjesen, 2019). In a study that involved the Career Thoughts Inventory, as well as several other measures, Strauser, et al. (2006) found significant relationships between high levels of trauma symptoms and the CTI total score and the three subscales. They concluded that "trauma symptoms negatively related to an individual's ability to make effective career decisions" (p. 354). Finally, in addition to mental health considerations, practitioners using a CIP theory-based framework may also want to consider how neurocognitive diversity factors impact career problem solving and decision-making.

Career Decision-Making and Neurocognitive Diversity

Given that effective career decision-making and problem solving is a task requiring an in-the-moment balancing of information, thoughts, internal and external presses, individuals with neurocognitive impairments or neurodevelopmental difficulties or disorders might face

additional challenges when engaged in career decision-making tasks. Some of these challenges may present as poor organizational skills, memory loss or increased forgetfulness, lower executive functioning (e.g., planning and executing decisions, regulating thoughts and behaviors), lower tolerance for frustration (Dipeolu et al., 2020), and impaired decision-making (Zamarian et al., 2011). In addition to impacting the CIP pyramid and CASVE cycle, neurocognitive challenges may also influence an individual's readiness to engage in the career counseling process and the types of career services and interventions that would be recommended. CIP service delivery tools (Sampson et al., 2020) provide a variety of resources for engaging clients with varied learning styles (see Chapter 7). For example, having a method for organizing career information or a plan such as an individualized career learning plan that lists and sequences steps might be a helpful resource for those with organizational skill challenges.

Career-related research on individuals with these challenges has yielded information that provides a fuller picture of how these types of challenges may interface with the career decision-making process. Some research has focused on career decision-making and individuals with ADHD diagnoses. For example, Bernardi et al. (2012, p. 881) found that adults with ADHD reported making significantly more "sudden changes in personal goals or career plans" than adults without ADHD. Caolo (2014) found an increase in dysfunctional career thoughts for those who had experienced ADHD-related stigma. Later sections of this chapter discuss using assessments that can help career practitioners determine appropriate interventions for clients who present with both career and mental health concerns, as well as considerations regarding how to create a service delivery setting appropriate to these types of interventions. In addition to research that highlights more negative mental health issues and their relationship to a person's career concerns, other literature has highlighted how positive factors such as meaning in life, hope and wellbeing are related to CIP constructs. These are discussed in the next section.

Influence of Positive Mental Health Factors on Career Decision-Making

Another focus in vocational psychology has been the influence of positive factors on career choice and satisfaction (Gelso & Williams, 2022). Positive mental health factors e.g., having a purpose in life (Buzzetta, et al., 2020), self-acceptance have been shown to be associated with having fewer dysfunctional career thoughts, and higher vocational identity levels (Strauser et al., 2008). Arslan (2022) reported that both subjective wellbeing and hope were positively related to career decidedness. With respect to well-being and mental health, Seligman (2002) identified five domains of life functioning essential for *well-being*, Positive emotions, Engagement, Relationships, Meaning, and Accomplishment. Another facet of well-being is *life satisfaction*, defined as an individual's overall feelings about their life unrelated to any specific point in time, or specific domain of functioning (Diener et al., & Tay, 2013; Roney & Soicher, 2021). Another facet of well-being is *meaningful work* which refers to the overall degree to which one perceives their work as meaningful (Steger, et al., 2012), as well as providing a sense of purpose in life (Ward & King, 2017). Allan et al. (2019) noted the relationship between fulfilling work and positive psychological outcomes and well-being.

Within CIP theory's CASVE cycle Valuing phase, individuals apply a broader array of considerations to evaluate 3 – 5 options identified in the preceding Synthesis phase. Among these considerations include the implication of each option in terms of one's self, significant others, cultural group and society. Further, there are ultimate considerations related to the impact

of a particular choice on one's mental health and personal well-being in terms of life satisfaction and meaningful work. The CASVE cycle's Valuing phase focuses on the exploration of these broad issues in the career choice process, and it is the engagement of such issues in career problem solving and decision-making that comprise a key component of CIP theory and its decision-making model.

In exploring the topic of meaning in work, Peterson et al. (2017) proposed the Hierarchical Model of Vocational Meaning (HMVM), inspired by Maslow (1954), in which there are four prominent levels of vocational meaning constructs in the form of a triangle with Survival at the base, Ego Centrism above it, Group Welfare next, and Universal Connection at the apex. The four respective levels of meaning are measured by the *Vocational Meaning Survey* (VMS; Peterson et al., 2017). A recent study by MacFarlane (2022) investigated the extent to which the four constructs of the HMVM theory were associated with two key dimensions of general well-being, life satisfaction, as measured by the Satisfaction with Life scale (Diener et al., 2012), and meaningful work, as measured by the Work as Meaning Inventor (WAMI; Steger et al., 2012). The results indicated that all four VMS dimensions VMS were significantly correlated with life satisfaction and with meaningful work. These results underscore the importance of perceiving two important sources of meaning in work, Group Welfare (which refers to the extent to which individuals derive pleasure and fulfillment from contributing to their work group or team in the attainment of organizational accomplishment and success) and Universal Connection (which alludes to the importance of contributing, through work, to the enhancement of community and society as well as the human condition itself), as contributing to one's well-being and mental health. From the perspective of CIP theory's CASVE cycle Valuing phase, in which an individual explores deeper and broader considerations of a potential career choice, the opportunity of deriving vocational meaning from contributing to one's work group or to society or a spiritual purpose may be an important means for connecting career choices to one's future well-being and mental health. In the next section, we discuss how CIP theory's readiness dimensions may relate to the intersection of career and mental health issues.

CIP Theory's Readiness Dimensions Related to Mental Health

As noted in Chapter 4, CIP theory includes readiness models related to career decision-making and a person's readiness to benefit from career interventions.

> *Readiness* for career choice is defined as the *capability* of an individual to make appropriate career choices while considering the *complexity* of family, social, economic, and organizational factors that influence an individual's career development. Another way of viewing these two dimensions is that capability represents internal factors and complexity represents external factors that influence an individual's ability to make informed and careful career choices (Sampson et al., 2000; 2004; 2020). Readiness for career choice also concerns an individual's cognitive, affective, and social state with respect to undertaking the task of solving a career problem.

Given these components of readiness, it is easy to understand how, for some clients, mental health factors may be associated with various aspects of readiness.

Capability

From a *capability* perspective, an individual's cognitive and affective states may be influenced to a small and large extent by mental health issues. As noted in Chapter 4 and in an earlier section of this chapter, clients may present with anxiety, worry, depression, negative thinking and related characteristics, which are likely to impact readiness, and specifically the level of assistance needed in a career services setting. See Table 4.2 in Chapter 4 for examples of the potential consequences of negative cognitions on various aspects of career decision-making. A key component of capability is the ability to think clearly and remain motivated to solve problems and make decisions. Needless to say, a person who reports or is diagnosed with mental health issues may not be able to engage with career decision-making tasks or benefit from career interventions when their capability is negatively impacted by these issues. Understanding these issues through the career counseling process is critical in determining the client's readiness state and their ability to benefit from career interventions. In addition, as we discuss later in this chapter, the nature of the organization, its practitioners, and organizational policies may impact services provided when a person's capability is limited due to mental health factors.

Complexity

In addition to capability, there may be *complexity* factors that are compounded by mental health issues. Chope (2012) has documented the significant role of family in the career decision-making process. As noted in Chapter 4, family factors that negatively impact a person can involve multiple elements or a single intense, overwhelming factor. For example, a person may be part of a family system that creates stress, anger, frustration, and related emotional states. Clients may have also experienced various forms of trauma in their family system (e.g., abuse, neglect, etc.) which in turn has led to mental health challenges that carry over into career-related decisions or experiences. Along with family, racial and cultural factors may contribute to the complexity of a person's career decision-making (Chope & Consoli, 2012; Tang, 2018). For example, a client may work in a setting where they are on the receiving end of harassment or other negative work interactions such as microaggressions, racial bias, and discrimination. Numerous scholars have documented how discrimination and racism can impact a person's mental health (Schouler-Ocak, et al., 2021; Williams, 2018). Further, persons who have been deprived of economic opportunity, adequate housing, education, healthcare, etc., may face additional challenges that contribute to the complexity of their situation, including their presenting career concerns. See additional content in Chapters 6 and 11 that speaks to diversity issues in relation to CIP theory's readiness model and career interventions.

From a CIP theory perspective, providing effective career assistance requires consideration of how mental health factors intersect with CIP theory's readiness model and the levels of service delivery. Both through assessments and the intake interview, practitioners can become more informed on the capability of the individual and the complexity of their situation. The next section discusses assessment tools that can be used in this process, followed by interventions that can may be appropriate given client readiness levels.

CIP Theory-Based Assessment and Mental Health

As noted earlier, CIP theory-based assessment tools help identify readiness for career decision-making and the ability to benefit from career interventions (see Chapters 8 and 9). Interpretation of the CTI, CSI, and DSW may illuminate existing mental health concerns. These

assessments have been correlated with mental health constructs such as depression (Walker & Peterson, 2012), neuroticism (Coleman, et al., 2023) and worry (Hayden & Osborn, 2020), among others. Information on the CIP theory website identifies studies with significant findings between CIP-based instruments and mental health constructs. Among CIP theory-based instruments, the CTI has had the most empirical studies linking to mental health constructs (see the CIP bibliography). While empirical research continues to emerge, the findings provide support for practitioners to consider the presence of mental health concerns when elevated scores on a CIP theory-based instrument are seen.

Assessment as Support for Mental Health Referral

Understanding relationships between CIP theory and mental health constructs is helpful for career practitioners as part of the initial screening process with clients. Sometimes individuals present with personal and social adjustment issues when they seek assistance for career concerns. These concerns may interfere with career problem solving and decision-making to such an extent that a career practitioner or a career services center is not able to provide appropriate assistance with respect to the career problem *per se*. In such situations, a referral to an appropriate mental health service may be required to fully help individuals with their initial career question that brought them to seek assistance (NCDA, 2015).

For example, it may be appropriate for a career practitioner to ask a client, who has elevated CTI scores, about whether they are also experiencing depression or anxiety. In terms of interventions, this depends on multiple factors, including the boundaries of competence that a career practitioner has for addressing mental health and psychological concerns (NCDA, 2015), the organization's policies about directly treating mental health issues (Lenz et al., 2010), whether the client is already receiving professional help for their mental health concerns, and the client's willingness to address the concerns as part of the career counseling and intervention process.

Routinely administered CIP theory-based assessments, as well as other commercially available assessments can provide useful information to support decisions pertaining to (1) whether referral is recommended or required, and (2) to whom referral should be recommended or negotiated. Depending on a client's mental health status, referrals may be made to (a) mental health counseling providers such as mental health counselors, social workers, or psychologists, (b) marriage and family therapists, (c) psychiatrists, or (d) rehabilitation services. The following presents a sequence of assessments that provide cumulative evidence which can be used to help make such decisions. See Chapter 8 for a more detailed discussion of how CIP theory-based assessments may be used in determining a client's readiness level for career interventions and the degree to which mental health issues may be impacting their readiness level. The list below highlights CIP theory-based assessments that may aid in clarification of mental health concerns that negatively impact career problem-solving and decision-making.

1. *Career State Inventory* (CSI, Leierer et al., 2022) – typically used as an initial screening instrument as part of the intake process which can provide immediate "red flags" that can alert a practitioner to possible mental health issues that may impact career problem solving and decision-making.

2. *The Decision Space Worksheet* (DSW, Peterson, et al., 2009) – serves as a measure of complexity for readiness for career counseling by having individuals state their career

problem, list all thoughts, feelings, persons, and circumstances associated with the problem, followed by an activity that allows them to indicate the importance of each element on the list in relation to the presenting problem. Because it is a constructive assessment, the DSW often functions as a projective device for revealing mental health issues.

3. *Career Thoughts Inventory* (CTI, Sampson et al., 1996a) – used to measure negative career thoughts that impair career problem solving and decision-making. As noted previously, numerous studies have shown the relationship between elevated CTI scores and various mental health constructs, e.g., anxiety, depression, hopelessness, worry, etc.

Use of the CIP theory-based assessments noted above can provide key information that point to the need for referral and/or additional screening using selected mental health assessments such as the Beck Depression Inventory II, the MMPI-2, and the NEO. In the authors' career services setting, such measures have been used for many years as part of individual case managed services. These types of assessments may indicate the presence of one or more mental health conditions that are potentially severe enough to impair effective career problem solving and decision-making. Depending on the scope of services in a particular career setting, possible referral should be considered where additional levels of support can be provided. A later section in this chapter discusses the integration of career and mental health interventions in a career services setting, and the extent to which that level of service delivery may be provided based on a variety of organizational factors. In keeping with the appropriate ethical guidelines, referrals for additional support should be made with consent from the client, in addition to consultation with peer counselors, supervisors, and available consultants who are knowledgeable and credentialled in mental health. Further, the purposes and goals of the referral should be made clear and understood by the client. Career services practitioners are encouraged to maintain communication with clients who are referred to other counseling services and, when appropriate, offer further career assistance when the goals of referral have been met. As this section has noted, assessing client readiness levels for career assistance can highlight mental health issues that intersect with career concerns. In a CIP theory-based services setting, the integration of career and mental health interventions must take into consideration a variety of factors to ensure that clients are well served and that organizations have the necessary staff, resources, and policies to support this approach to career assistance.

Integrated Career and Mental Health Interventions

As noted in earlier portions of this book, CIP theory integrates three levels of service delivery (Sampson, et al., 2020). In both self-help and brief staff assisted, readiness screening (Sampson et al., 2013) occurs to determine how clients' needs can best be met. In the section above on readiness dimensions, we noted that when individuals have both low capability and high complexity, they are likely referred to individual case-managed services. The section above also highlighted how a variety of assessments can point to clients' needs for more in-depth assistance. As Lenz et al. (2010) discussed, career services settings may vary in terms of the extent to which they integrate career and mental health interventions. There are a number of issues to consider when determining the capability of an organization or center to offer counseling services that combine elements of career and mental health counseling. These issues are discussed in the sections that follow.

Setting and Scope of Practice

Lenz et al. (2020) noted: "Career and mental health counseling services may share common ground in terms of philosophy, theory, and research, but the most difficult barriers to a holistic approach may occur with program implementation" (p. 2). Each setting, be it a university-based career center, community agency, government office, or even a private practice, may have unique factors that influence the extent to which career and mental health interventions can be combined. Lenz et al. (2010) discussed 5 topics related to the scope and practice of this type of integrated service. These included (1) institutional culture and policies, (2) administrative structure, (3) space, records, tools, and resources, (4) professional identities, and (5) supervision, training, and liability.

In some organizations there may be clear guidelines regarding which units provide career versus mental health services. This may be the case in university settings where the scope of practice for each unit is clearly delineated. Decisions about offering integrated services would need to be coordinated by individuals higher in the organization's administrative structure. The nature of services provided may also impact how the unit is labeled, e.g., counseling and career services, as well as how the program is marketed to key stakeholders. Whether the integrated career and mental health interventions occur in a larger organization like a university career center or a government agency or within a private practice setting, the organization's website could be used to highlight the range of services provided.

Integrating career and mental health interventions also requires attending to staffing, space, records, tools, and resources (Lenz et al., 2010). Staff may include professional career counselors, counselors-in-training (interns, doctoral students), licensed mental health counselors and psychologists. Staff training and credentials are critical considerations in determining the scope of practice for individuals when working in a setting that combines career and mental health counseling. These staff members are also bound by a range of ethical guidelines that informs their scope of practice, including ACA, APA, NBCC, NCDA. For example, APA's Ethics Code (APA, 2017), under the boundaries of competence section, states that "psychologists provide services, teach, and conduct research with populations and in areas only within the boundaries of their competence, based on their education, training, supervised experience, consultation, study, or professional experience" (p. 5). NCDA's code of ethics (NCDA, 2015) notes that career professionals must "practice in a nondiscriminatory manner within the boundaries of professional and personal competence and have a responsibility to abide by the *NCDA Code of Ethics* (p. 9). In addition to having staff employed who possess the knowledge and skills to provide interventions that address career and mental health concerns, there is also a need to attend to ongoing training and professional development. This may be provided through in-service sessions within the center or agency. The organization may also provide funds for staff to pursue continuing education opportunities in support of their professional credentials. One positive outcome of the COVID pandemic was the increase in web-based learning opportunities for counselors and psychologists, regardless of work setting.

Along with staff competencies and training, other factors to consider include the space used for counseling interventions, be that one-on-one, groups, workshops, or other formats. There must be arrangements to securely store client records. Online systems may be used to schedule client appointments, record counselor-client interactions, and administer assessments. Depending on the nature of the assessments used, there may need to be specialized training for

staff, and there are budget implications associated with the types of assessments described earlier in this chapter.

In summary, there are a variety of factors to consider within an organization when clients are served who are presenting with career and mental health concerns. Lenz et al. (2010) provide a university career center-based case study example which applies CIP theory to highlight the integration of career and mental health counseling interventions. The next section provides additional information on specific interventions that might be used to further the use of holistic interventions (Zunker, 2008) when serving clients who present with career and mental health issues.

Specific Interventions Used

The inclusion of mental health issues within the framework of CIP theory has led to various interventions that reflect the theory's emphasis on the integration of theory, research, and practice. For example, the CTI manual (Sampson et al., 1996a), drawing on Beck et al. (1979) cognitive therapy's approach, provides guidelines for integrating cognitive restructuring interventions into the career counseling process. Practitioners can use the *CTI Workbook* (Sampson et al., 1996b) and journal exercises to support this type of restructuring activity. Career practitioners may also use talk aloud protocols for discussion of CTI items endorsed as agree or strongly agree, which can reveal other mental health/life concerns. Using subjective assessments such as card sorts (see Chapter 9) with a talk aloud protocol may also illuminate mental health factors that are impacting aspects of a person's Pyramid or CASVE cycle phases. ILPs (Individual Learning Plan) and tools such as the Guide to Good Decision-Making Exercise can be used to help give clients a sense of ownership, structuring client learning, facilitating goal setting, and providing hope that the career problem can be addressed, which, in turn, may help reduce anxiety and worry associated with career decisions. As noted throughout this section, integration of career and mental health assistance typically focuses on in-person assistance via individual case-managed services. Over the past several years, the growth of telehealth (Owings-Fonner, 2020) and the impact of the COVID pandemic, have highlighted how this type of integration can occur virtually (Osborn et al., 2022). Key tools and assessments based in CIP-theory have been adapted for virtual use including the CTI, *CTI Workbook*, CSI, ILP, *Guide to Good Decision-Making Exercise* (GGDME), and related resources.

In addition to individual case-managed services, CIP theory-based career and mental health assistance can be provided via group programs (Hayden, 2018; Leuty et al., 2015) or workshops. M. Buzzetta (personal communication, March 12, 2023) described her development of a counseling center-based ten-week group therapy program that included the used of CIP theory-based content, tools, and assessments, e.g., CTI, *CTI Workbook*, Decision Space Worksheet). At the end of the group, participants were found to have decreased CTI total scores and reported increased confidence in their career problem-solving and decision-making skills. This chapter's senior author was involved in a workshop that was part of a mental health series targeted at post-baccalaureate fellows, graduate students and post-doctoral fellows affiliated with a government institute and biomedical and biological sciences programs across the US. CIP theory concepts were shared, including the CASVE cycle, to highlight challenges in the decision-making process for this population. Connections were made to emotional states that affect the acquisition of self-knowledge and options knowledge and impede effective engagement in the career decision-making process. Impacts of the COVID-19 lock-down and

isolation were highlighted in relation to career exploration, career decision-making, and career planning. Small group discussions, which were facilitated by career and mental health providers, were offered to participants to enable them to further process the content shared and examine the personal relevance of the material (D. Saunders, personal communication, March 16, 2023). For additional examples of CIP theory-based interventions, see Chapter 7.

Finally, another aspect of CIP theory-based interventions is the focus on the critical ingredients of effective career interventions (Brown et al., 2003; Sampson et al., 2020). See Chapter 7 for a more detailed discussion of this topic. These critical ingredients (e.g., assessment, support, modeling) are well suited to service delivery approaches that combine career and mental health interventions.

Chapter 10 Summary

Career clients often present with mental health concerns which can add to the complexity of career problems and impact engagement in the career decision-making process. This chapter examined the integration of mental health and career concerns from a CIP theoretical perspective. CIP theory provides a framework for career problem solving and decision-making that can further illuminate life complexities including specific mental health concerns. Research on the relationships between CIP theory constructs and mental health factors were presented, highlighting the importance of awareness of mental health issues in the career decision-making process. The influence of negative thinking in the career choice process was discussed as related to career decision-making readiness, specifically, capability and complexity. Suggestions for consideration of scope of practice and referral options when integrating career and mental health concerns in career service settings were presented. Finally, the chapter references CIP theory-based assessments and provides a discussion of interventions to aid in integration of career and mental health concerns.

Getting the Most Benefit from Reading Chapter 10

To effectively learn the material in this chapter, complete one or more of the following activities:

- Discuss how CIP theory's readiness component informs the integration of career and mental health issues within counseling.

- Describe assessments that could be used to identify client mental health issues within a career services delivery setting.

- List at least 5 key factors to consider when providing career and mental health assistance in a particular setting.

- Consider a work setting you are affiliated with and assess how clients presenting with career and mental health issues might be best served.

- Consider a career counseling client scenario where a referral would be appropriate due to the complexity of mental health and career concerns presented. Share possible referral resources and or practitioner interventions for the client.

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CHAPTER 11
DIVERSITY AND CIP THEORY-BASED CAREER INTERVENTIONS[56]

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This chapter examines the importance of considering diversity in the development and use of CIP theory-based interventions. We first review the importance of considering diversity in career interventions by summarizing Chapter 6. We give a brief overview of existing barriers and discuss the importance of career interventions with diverse groups. We then provide a context for

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understanding career interventions in diverse groups by discussing cultural mistrust and assessing readiness for career interventions with particular attention to the use of career assessments. We highlight the importance of culturally tailored interventions before briefly highlighting how important it is to consider social justice within CIP theory. The chapter ends with a case study showing an implementation of the concepts discussed, followed by a chapter summary and recommendations for getting the most benefit from reading the chapter.

Summary of Chapter 6 (Diversity and CIP Theoretical Concepts)

In Chapter 6, we discussed the importance of considering diversity within CIP theoretical constructs. We defined diversity as including differences among individuals based on demographic characteristics including age, disability, ethnicity, first generation status, gender identity, geographic location, immigration status, indigenous background, nationality, race, religion, sexual orientation, sex assigned at birth, socioeconomic status, and others. We highlighted some diversity considerations in a discussion of the Pyramid of Information Processing Domains and the CASVE cycle and readiness for career problem solving and decision-making. This chapter builds on Chapter 6 by discussing the challenges and importance of considerations of diversity for career interventions, including CIP theory-based interventions.

History of Career Interventions with Diverse Groups

Although there is a great deal of career development literature available on career issues in diverse populations (Evans & Sejuit, 2021; Garriot et al., 2017), career intervention development and research on the efficacy of these interventions for diverse groups continues to evolve. As Leong et al. (2013) noted "career counselors should design or adapt interventions that are tailored to meet the client's needs, and which incorporate cultural factors related to the client's concerns" (p.74). Many career interventions used in providing career assistance include some type of career assessment. However, a key concern is the use of normed measures in the assessment of personality constructs and abilities (Tang, 2019). Scores from such measures are used to verify or challenge existing self-perceptions of important personality dimensions involved in exploring potential career opportunities (Osborn & Zunker, 2016). However, the validity of such measures as applied to an individual's results may be called into question when life's experiences that shape the development of self-knowledge schemata, the semantic interpretation of words contained in the measures, or the opportunity to master certain cognitive skills differ appreciably from those of the dominant culture (Fouad et al., 2003). For example, stereotypes about STEM careers have been shown to negatively predict students' self-efficacy in STEM-related activities as well as their expectations for career-related outcomes (Luo et al., 2021). If a client holding these negative stereotypes, combined with low self-efficacy about STEM-related activities, is given an interest or skill inventory, this research suggests they might rate themselves lower on STEM-related items, and thus have fewer stem-related occupational options presented as a result. In this example, the validity of the assessment results and corresponding occupations may not be valid. See Belser et al. (2023), Brown (2014), Brown and Lent (2020), Evans and Sejuit (2021), Fouad et al. (2003), and Tang (2019) for a more detailed discussion on the use of career assessments with members of diverse and marginalized groups. In light of this, Hansen (2020) recommended that practitioners be alert to how the cultural experiences of clients may impact their test results, whereas Fouad and Kantamneni (2020) recommended incorporating cultural values into the discussion of career options (which might be generated as a result of a career assessment).

Career interventions have been most often categorized into individual career counseling or career classes, workshops. structured groups, and counselor-free interventions (Whiston & James, 2013). Interventions widely used in prior years were largely developed using research conducted on white populations and may be limited in their effectiveness when used with other groups (Risco & Duffy, 2011), and many fail to account for the systemic factors that affect individuals from marginalized groups such as oppression and discrimination (Gloria & Herd, 1999). The development of culturally tailored interventions for individuals from diverse groups is critically needed to address structural inequities and impart positive career experiences for individuals from diverse groups (Evans & Sejuit, 2021).

Context for Mistrust

One of the reasons that career research conducted has been predominantly representative of white populations and individuals from more privileged groups could be that individuals from marginalized groups may be reluctant to engage in research due to mistrust (Scharff et al., 2010). There is a history of researcher deception in the medical field in particular, in the United States with populations of color (Corbie-Smith, 1999) and other disadvantaged groups (Ho et al., 2022), that may extend to other helping professions. For example, people of color are also less likely to seek treatment for mental health purposes (McGuire et al., 2008). This lack of access may also extend to career services. For example, Makela et al. (2014) shared a report that showed student demographic information with respect to who was using their career center services and found underuse by all ethnic groups, as well as sexual minorities. Reasons for not seeking help may be due to sometimes higher levels of taboo around mental health issues and seeking help outside of the family unit for life problems (Wong et al., 2017), as well as a scarcity of providers who match the racial and cultural background of individuals from racial minority groups (Meyer et al., 2013). Given this mistrust in other helping fields, there is a potential mistrust of career counseling as well, and therefore, it is vital for career practitioners to be intentional in the development of their relationships with diverse clients. It is also important to acknowledge that clients may question the veracity of information that is shared because of their mistrust; hence sharing sources of information is critical, and not simply expecting clients to believe the practitioner as a person who because of their position has more power and privilege in that relationship. Outside of the career center setting, practitioners can provide outreach to organizations that serve people of color and individuals from other marginalized groups. Developing relationships and engaging in collaborations with such groups are important for building trust and collaborative research and practice-oriented relationships.

Diversity Issues in Readiness Assessment

As described in Chapter 4, diversity plays an important role in people's readiness to engage in career decision-making and problem-solving, whether that diversity is in the form of personal components (e.g., race, gender, sexual orientation), social identities, or environmental responses (e.g., racism, sexism, discrimination). When it comes to assessing readiness for making career choices and benefiting from career interventions, career practitioners should be aware of how diversity and cultural background may play a role (Evans & Sejuit, 2021; Leong & Flores, et al., 2013). From choosing assessments, to administering and interpreting results, career practitioners must consider the appropriateness of these assessments to be used with diverse populations (Leong & Flores, 2013; NCDA, 2015; Tang, 2019). Diversity isn't always obvious, and career practitioners need to be cautious about making assumptions and implementing well-

meaning interventions or recommendations that could actually be inappropriate or even harmful. For example, someone from an economically disadvantaged background might have difficulty paying for career assessments and may be uncomfortable sharing that information with a career practitioner. Another example could be a person with a hidden disability who would prefer auditory interventions as opposed to ones that involve significant amounts of reading or writing.

Other areas for possible conversation with diverse clients include "racial or ethnic identity, acculturation, worldview, socio-economic status, gender role expectations, family expectations and responsibilities, primary language, and relationships" (Flores et al., 2003, p. 84). As an example, someone for whom their first language preference is not that of the practitioner, or someone who has a deficit or a disability that impedes their ability to understand and honestly answer questions might have difficulty answering questions related to career readiness, and they may be reluctant to share that difficulty. As a specific example, someone from a majority group directly asking someone from a marginalized group if they have experienced discrimination might result in feelings of fear or confusion, such as whether the practitioner will believe them or be minimizing or dismissive if the client says that they have had that experience. Thus, questions regarding readiness have to be asked as trust is established and with cultural humility and respect. In addition, and as mentioned previously, scholars (Flores et al., 2003, p. 83) have suggested that "culturally appropriate career assessment" differs from career assessments in general, because client information that is culturally relevant is integrated as the practitioner tries to understand the client's experiences. To achieve this, some authors (e.g., Evans & Sejuit, 2021; Flores et al., 2003) have recommended that career practitioners should consider using multilevel and multimethod approaches. Multilevel approaches might include discussions about the person's individual views of themselves and their options, familial and cultural influences, as well as social and environmental considerations. Multimethod approaches involve using various approaches, both formal and informal, to understand a client's world view (Evans & Sejuit, 2021; Tang, 2019).

Culturally Tailoring CIP Theory-Based Career Interventions

Cultural tailoring, which has roots in the delivery of healthcare services, involves adapting an intervention to reflect the cultural needs and preferences of a specific population (Torres-Ruiz et al., 2018). It is important to culturally tailor interventions for individuals from marginalized groups (e.g., racial minorities, sexual gender minorities, etc.) at both a surface and a deep level. Surface cultural tailoring involves matching intervention materials and messages to observable (but also important) characteristics of a target population (Resnicow et al., 1999). A practical example would be having printed materials that reflect the identities of the client. Deep cultural tailoring means demonstrating an understanding of the cultural, social, historical, environmental, and psychological forces that affect the target health behavior in the target population (Resnicow et al., 1999) in the development of interventions. For example, assessments can be adjusted to account for differences in lived histories (e.g., being from a marginalized group or not). In CIP theory, surface cultural tailoring would involve using culturally relevant examples of CIP theory constructs in career interventions with a client to match their background. One example would be having a Spanish version of CIP-based guides available for clients who prefer that option. Deeper cultural tailoring involves an understanding of the impacts of systemic oppression on individuals from marginalized groups and ways in which to combat this oppression, and tailoring interventions to address these barriers.

Ethical career practice involves consideration of a person's identities and background in understanding their career concern, choosing, and interpreting assessment results, and in identifying and implementing interventions (Evans & Sejuit, 2021; Leong & Flores, 2013; NCDA, 2015). CIP theory acknowledges and encourages the incorporation of diversity dimensions into the exploration of each of its elements (Sampson et al., 2004; 2020). Before examining the specific elements with a client, asking a more general question about how the client typically makes decisions might serve as an opening to the incorporation of identities into the career conversation. Follow up questions might ask whose voices are important to them when making major decisions, or whom they have talked to in the past when making decisions. Fouad and Kantamneni (2020) recommended asking clients about the most important influences on their career decisions as a way to explore the salience of cultural values in clients' decision-making. Brown et al. (2003) surmised that intervention effectiveness across cultures is mediated by the amount of intervention structure required as well as the client's level of social support needed. Spokane et al. (2003) also suggested considering where a client falls in terms of the individualistic versus collectivistic continuum when selecting and implementing interventions. Therefore, practitioners should consider these elements when considering particular career interventions.

Culturally tailoring CIP theory-based interventions does not imply that the career practitioner knows what aspects of a person's identities are salient to their career decision, nor specific strategies that are most impactful given those aspects. In the spirit of cultural humility, a career practitioner would invite, as they discuss and explore each of CIP theory's components (Sampson et al., 2020), the client to identify and share other aspects of identities that might be relevant to that component. For example, self-knowledge typically focuses on interests, values, and skills. Those categories are not exhaustive, however. One's spirituality or personality might also be included. Experiences with racism and other traumas can impact self-knowledge (Robnett, 2016). Stoltz et al. (2023) suggested in cases where trauma has impacted childhood, to modify questions around certain age ranges or to examine "outward expressions" (p. 6) of their self-knowledge that might reflect culture such as dress, jewelry, tattoos, and the like. In some cases, collectivist values may be more important to the client than individualist ones (Spokane et al., 2003). In addition, assessments cannot include a comprehensive list of all possible interests, values, and skills (Osborn & Zunker, 2016). Thus, a career practitioner may want to ask, either during or following an assessment, if there were other items the client wished to include that weren't presented on the standardized assessment or card sort. Asking about how significant others view the client or even asking if the client would like someone else present during the career conversation are examples of culturally sensitive approaches (Fan et al., 2014).

Options knowledge is built through life experiences. Fouad and Winston (2005) noted individuals experience different opportunity structures and these influence "work-related expectations, aspirations, and behavior, both in actual and perceived opportunities for career choices" (p. 225). Some individuals have vast exposure to a wide range of experiences, whereas others have limited exposure. Experiences with discrimination may impact how a person sees their options (Lease, 2004), or the degree to which they trust information sources, or whether that information is true for others but not for them. Racism and oppression may have played or be currently creating barriers to career options (Fouad & Kantamneni, 2020; Tang, 2019). Having individuals in their sphere who have traveled the road before and thus can provide not only guidance, but a visible example of success can be a powerful source of options knowledge and

social capital, while not having those individuals can be seen as a detriment (Howard et al., 2015; Kelly & Shin, 2009; Taveira & Moreno, 2003).

When working with a client on options knowledge, comparing the types of work and occupational/educational representation of family and friends to the types of work the client is considering can provide a picture of how close or far away their career plans are to significant others in their life. This might also provide a source of support or further information as they explore potential paths. In working with a client who has experienced or is experiencing discrimination, the career practitioner should take time to process the impact of those experiences on the client, and to explore what steps the client might want to take moving forward with respect to those experiences. They might also identify sources of further support available through national advocacy groups such as the Asian Americans Advancing Justice (AAJC), Equal Justice Initiative (EJI), National Association for the Advancement of Colored People (NAACP) or the American Civil Liberties Union (ACLU). A career practitioner might also help a client identify options for reporting discrimination within the client's setting. For example, if the client is an employee, the practitioner might explore safe avenues for disclosure, such as talking with a trusted colleague or supervisor on recommended steps. In addition, they might encourage the client to review human resource policies within the organization to see if there are clear steps on how to report discrimination. In the U.S., the Equal Employment Opportunity Commission provides guidelines for how to file a charge of employment discrimination (https://www.eeoc.gov/how-file-charge-employment-discrimination)

As mentioned earlier, asking individuals how they typically make career decisions is a recommended first step in working with a person on their current career decision. The CASVE cycle can be introduced as one type of model for career decision-making and problem-solving, while noting that individual considerations are incorporated in each step. For example, in the Valuing phase, a person is encouraged to consider how the costs and benefits of the three to five options they are considering with respect to themselves, their significant other(s), cultural group, and society at large. It's possible, in the cultural view, that a person might not want to consider one or more of those variables, or that a person wants to add another variable, such as calling (Dik et al., 2020). Inviting the person to add or subtract or combine areas within each phase of the CASVE cycle can help support integration of identities into the process. It is also possible that a client might not want to work through the CASVE cycle with an independent mindset, but might prefer to include others' voices through the phases.

Career thoughts also develop from interactions with external forces, whether in a person's immediate environment, geographic location, or society at large. These interactions may be positive or negative, and grounded in myth or reality. One's identities, including messages from family and community can contribute to how one sees themselves and their options. Positive career-related thoughts can serve as a source of support, while negative career thoughts can potentially limit options (Sampson et al., 1996). For example, when someone endorses a CTI item that states that a significant other disapproves of my choice, it is possible that an individual might in turn decide to discard that option from consideration. Of course, depending on the individual, they may decide to ignore that opinion and pursue options that they deem best suited to their life goals.

When exploring negative career thoughts, especially those related to external conflict, a career practitioner should remember that these reflect the client's self report, and may be true, may be a misperception, or are possibly being used as a protective statement to relieve the stress

of decision-making. The statement, "I must choose a career that pleases my parents" is an example of such a statement. The degree to which this thought is hindering the person's ability to decide can be further explored by the practitioner. If, for example, the client believes that the options they value will also please their parents, the impact of that belief will likely be minimal. If, however, the option they have prioritized as a first choice in the Valuing phase of the CASVE cycle, directly conflicts with their (perceived) parents' wishes, further discussion is warranted. This may include a variety of approaches, such as helping the client determine the truth of that belief or discussing the client's thoughts of pursuing (or dismissing the option), using the *CTI Workbook* to explore the specific thoughts related to family input, role-playing possible discussions the client anticipates having with family members, and so forth.

One's identities can also be a positive source for career beliefs. Accessing and understanding personal, familial, spiritual, cultural beliefs about the self and career can be sources of encouragement and help to address negative career thoughts. For example, for someone whose culture sees ancestors as providing guidance, a career practitioner might ask the client what they perceive that ancestor might say to them with respect to a negative career belief. If the client agrees with the message, that statement could become a career reframe and help the client move forward in that aspect of the decision-making process.

Chapter 4 provides details on how diversity can play a part in readiness for career decision-making and problem solving. In terms of interventions, career practitioners should examine the potential role culture plays for each aspect, determine with the client if there is a desire to adjust the impact, whether to aim to enhance or minimize, and the strategies for doing so. Next, we discuss social justice or action toward equity and its role in CIP theory.

The Role of Social Justice in CIP Theory

Social justice is defined as "active efforts to transform institutions and systems that impede human rights and distribution of resources" (Beer et al., 2012, p. 120). Social justice advocates embrace the notion that changes to the structural environment in which we live is imperative for the treatment of societal problems and individuals from marginalized groups (DeBlaere, et al., 2019). It takes a macro-level view (i.e., systems in which we live) of problems instead of a micro-view (i.e., individual). Arthur and Collins (2011) noted the importance of shifting career interventions to support social justice in action. Within this framework, CIP theory-informed career practitioners recognize the importance of practicing culturally competent career counseling (Evans & Sejuit, 2021), specifically conceptualizing their clients with consideration of their lived experiences and marginalized background. In what ways has structural oppression impacted the client and their career decision-making process? Moreover, in what ways can we work towards changing these structures for a fairer and more equitable world? It is imperative that CIP theory-informed practitioners embrace diversity principles, adopt an attitude of cultural humility, and seek to better understand our client's worldviews (Evans & Sejuit, 2021) and the environments they inhabit. Finally, as noted in Chapter 7, CIP theory has consistently emphasized an approach to practice that creates greater access to career services for persons from all backgrounds (Sampson, et al., 2017).

Case Study

Seon-ho is an Asian American unemployed worker in his 30s. He identifies as a heterosexual male and lives with his parents. Seon-ho attended college for Engineering, but he has always struggled with maintaining his job. After a few months in his current job, he was laid off. Both of his parents are medical doctors who were born in South Korea, and they regularly communicate to Seon-ho their disappointment in him. Seon-ho would like to change careers because he does not enjoy working as an engineer (and he does not feel he is good at it). Using CIP as a theoretical framework, in the self-knowledge domain, in addition to exploring his values, interests, and skills, encouraging Seon-ho to explore his identities as a man from a higher social class and immigrant family and how these factors relate to his career choices is pivotal. The career practitioner might also discuss how his self-knowledge developed, what is valued in his family and community, and how the two intersect but also diverge. Having a clear sense of what is most important to Seon-ho will provide an important reference point as he moves into exploring career options and moves forward in the career decision-making process.

In the options knowledge domain, exploring how his identities influence, but may also potentially limit, his view of his career options may be also important to explore. For example, given that both of his parents are medical doctors and expected him to follow their career paths, the role models he has been exposed to across different occupations may have been limited. How does this pressure influence perceptions of choice around career, if at all? It would also be useful to explore any experiences he has had with discrimination related to his identity as an Asian American and how these may have shaped his perceptions around potential options. As he explores different career options, encouraging Seon-ho to reflect on how the options compare to the areas he indicated as important in his self-knowledge exploration is recommended.

In the decision-making skills domain, examining each phase of the CASVE cycle is important. Working through the *Guide to Good Decision-Making Exercise* (Sampson et al., 1992) might be a useful structure that provides tangible evidence of making progress on his career decision. Given the increased complexity Seon-ho is facing due to the importance of family, beginning with and focusing on the Communication phase is recommended, as it should provide a comprehensive picture of the gap between where he currently is in the career decision-making process and lay out a picture of what it may look like, how others may respond to him, how he might feel, etc., when he has made a career commitment. As he moves to analysis and synthesis, an assessment that helps him clarify his interests, values, and skills, and link them to options might also be helpful. In the Valuing phase, exploring how the prioritized options compare to expectations of himself, his family, and his community, will be an important discussion. As he tries out his first choice in Execution, and revisits the Communication phase, returning to a discussion on how aspects he first identified as contributing to his initial indecision have or have not changed will provide evidence that he has made a good choice, or that he needs to re-visit certain phases of the CASVE cycle. Throughout each phase and intervention, asking about how his experiences and cultural impacts may add to the understanding of how he is uniquely experiencing that aspect of decision making.

Finally, in the executive processing domain, it is important to explore how any discrimination experiences may have been internalized and contribute to Seon-ho's difficulties with maintaining previous jobs. How are these challenging workforce experiences affecting his mental health? Would taking an inventory aimed at negative career thoughts, such as the Career Thoughts Inventory (Sampson et al., 1996), be useful? The career practitioner can anticipate that

the *External Conflict* scale might be elevated, but is it possible that the other scales are also elevated and might need to be attended to? In addition, are there cultural and/or familial beliefs that act as supports for him when he faces important decisions, that might be incorporated as he engages in the career decision-making process? If there are positive beliefs or mantras that Seon-ho holds about life in general, these may be adapted as cognitive reframes if negative beliefs are identified.

Interventions that connect Seon-ho to role models with similar cultural backgrounds in different fields may be helpful. In the absence of such role models, the practitioner can work with Seon-ho to model how online social media groups can be utilized to expand his employment-related networking contacts. When working with Seon-ho and conceptualizing his career narrative, the CIP theory-informed practitioner should also consider the influence of society and the biases around Asian Americans. Engaging in critical conversation about race and culture with members of the Asian American community may further illuminate some of the structural factors impacting Seon-ho's career development.

Chapter 11 Summary

This chapter builds on Chapter 6, by discussing the importance of culturally tailored CIP theory-based interventions for individuals from diverse backgrounds. We provided a context for the mistrust that may exist in marginalized groups, which impacts practitioners' ability to engage with these groups to develop culturally tailored interventions. Finally, we discussed the role of social justice within CIP theory and ended with a case study.

Getting the Most Benefit from Reading Chapter 11

To effectively learn the material in this chapter, complete one or more of the following activities:

- Describe how diversity factors may influence specific CIP theory-based interventions.

- Identify specific questions you can ask that might encourage clients to explore how their identities and diverse backgrounds contribute to their career decision-making.

- Consider how your own unique background and identities have influenced your career decision-making process. Identify these contributions for each area of the CIP pyramid and the CASVE cycle.

- Identify beliefs or common sayings in your family or community and consider how these might also apply to your career decision-making.

- Consider how a client's use of a particular career assessment might be impacted by their unique life experiences, cultural background, and other contextual factors. How will this knowledge influence your decision to use the assessment and your discussion of the results with the individual?

- Read local, state, and national news. Reflect on the ways in which current events may be affecting you and your clients. Consider the ways in which the systems in which we live may be at the root of the existing problems in the world. Read about the history of different marginalized groups in your local environment. Think critically about how this

history may still be influencing their lives today. Consider the history of your group. How does that history manifest in you today?

- Watch a film about a group of individuals from a different cultural background. Reflect on the differences between this group and the group to which you belong. Consider the impact of systemic oppression for the group. Does it exist? Does it not? How might structural oppression be impacting their problems in the film?

- Attend a local cultural event for a group that you are not familiar with. Notice how you feel at the event. Consider the differences between this event and your own cultural events. Reflect on how these differences may impact the lived experiences of people in this group.

- Send a letter to your local government about a concern facing individuals from a marginalized group in your community. Advocate for change by indicating some tangible action that can be taken by the local government to reduce marginalization.

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CHAPTER 12
CASE STUDY FOR INDIVIDUAL CASE-MANAGED SERVICES

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This chapter presents a case study showing how CIP theory can be used in individual career counseling, which is one form of individual case-managed services.[57] After reviewing this chapter, the reader should understand how CIP theory could be applied with a client who is receiving individual career counseling. The chapter begins with the case of Andrew, a community college student, and continues with a summary and concludes with a section on getting the most benefit from reading this chapter.

The chapter's case study shows how a practitioner in a career center or counseling center might integrate CIP theory into the creation of an Individual Learning Plan (ILP) to help the client become a better career problem solver and decision maker. The case study allows us to illustrate the nature of complex career problems and the way they may be addressed within CIP theory. Although this case study does not fully represent the cognitive complexity of the client's career problem solving and decision-making or depict the full range of service delivery options available, it does demonstrate how a CIP theory-based paradigm might be used to deliver individual case-managed career services.

The case studies presented in this book are composite descriptions of hypothetical individuals drawn from the authors' counseling experiences. Any resemblance, therefore, to specific persons is purely coincidental. Although the case study presented in this chapter is hypothetical, the procedures and resources that are used reflect actual practice and available resources. We want to emphasize that the assessment, information, and instructional resources used in this case are *not* the only resources that can be used with a CIP theory-based approach, as the theory accommodates the use of a wide range of career resources. We have limited the resources depicted in this case study to <u>actual resources we use in practice</u> in order to present the most accurate picture possible of the application of CIP theory in a real-world setting. The cases in this book have been updated from the cases presented in Sampson et al. (2004). Refer to Chapters 4 and 7 for a discussion of readiness levels and career assistance options that provide the basis for the case studies presented in this book. All identifying information for the clients and practitioners has been changed to protect confidentiality, especially since we include practitioners' last names.

The Case of Andrew

Background

Andrew is an 18-year-old first year community college student majoring in general studies enrolled in the college's University Transfer program. He is seeking assistance from the community college career resource center to help him decide what he wants to do in life. Andrew shared some details about his typical academic performance in high school, past employment, and his parents' history of employment, education, and leisure activities. He reported that he typically maintained a B average in math, an A average in physical education, and a C average in other subjects. Andrew enjoys a variety of sports activities. Basketball is his favorite sport, and he was on the basketball team each year in high school. Finally, he also enjoys playing a variety of sport and fantasy-based video games.

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[57] Content in this chapter was used or adapted from Sampson et al., (2004). Used or adapted with permission.

Andrew has held a variety of jobs. He has been a food runner at a local restaurant, a grocery bagger at a local supermarket, and a cashier at a local hardware store. His main objective in working has been to earn money for his car and for going out with his friends. When asked by his parents, "What do you want to do now that you've graduated from high school?" he was unable to provide a definite answer. His most consistent occupational aspiration has been to become an Air Force pilot. However, recently diagnosed limitations in his vision have eliminated this option. He now wears corrective glasses all the time.

In addition to having uncertain career plans, Andrew doubts his general decision-making abilities. When making decisions, such as selecting a gift, purchasing clothes, or choosing which friends to spend time with, he often hesitates until forced by some external circumstances to decide. His parents often criticize Andrew for his inability to make choices, especially when he delays making a decision for so long that only one option remains. After Andrew continued to express confusion regarding what he should do about his career, his mother suggested that he talk with a counselor at the community college.

Andrew's mother owns and operates a pet supply store; his father is a police officer. Andrew's mother graduated from high school and has worked in various clerical jobs in the purchasing department of a retail products manufacturer. After working for four years, she began attending community college in the evening to pursue a degree in merchandising. Although her academic performance was satisfactory, she was unable to maintain adequate motivation to complete this program of study. An opportunity to move from her job in purchasing to a data entry job in the comptroller's office resulted in greater job satisfaction. Encouraged by her success, she went on to complete an Associate of Science degree in accounting eight years ago. With the support of her family, four years ago she opened her own pet supply store after working as an assistant manager of a similar business. Her job satisfaction has increased as a result of the greater independence and economic rewards, in spite of the greater time demands and risks that are part of her new job. Andrew's mother's avocational pursuits are serving as financial secretary at her church, gardening, and competing regularly in an adult swimming league.

Andrew's father has worked as a police officer for the past 21 years. As an adolescent, he thought that being a police officer would earn him respect from his peers and give him an opportunity to demonstrate his capabilities. After graduating from high school, he joined the army and served as a military police officer. This training and experience later enabled him to obtain a job in his hometown as a police officer. In an attempt to improve his opportunities for promotion, Andrew's father completed an A.S. degree in criminal justice two years ago that ultimately led to a promotion as a sergeant. He has been given additional responsibility for supervising newly hired police officers. Andrew's father's avocational pursuits include playing basketball regularly in a YMCA league and coaching a YMCA youth basketball team. He is also an avid fisherman, and he and Andrew still enjoy this activity together from time to time.

Several internal and external cues have prompted Andrew to become aware of his career problem (the Communication phase of the CASVE cycle). His anxiety about the gap between his real state of affairs and his ideal state has increased considerably as his parents question his lack of future plans. He has received several external cues within the last two weeks. First, his best friend brought him an employment application form from the grocery store where the friend works. Second, the local army recruiter, who had talked with Andrew at the community college, called to offer any additional information that Andrew might need to decide about leaving college and joining the army. The fact that Andrew was considering joining the army as an

enlisted soldier, as opposed to completing college and entering the army as an officer, has created considerable conflict with his parents, especially with his father. Finally, Andrew's mother told him that they would be finalizing their summer vacation plans within the next month, and he needed to let them know what his summer plans were so that reservations could be made. The combination of internal and external pressure led Andrew to take an initial step towards resolving his current career decision state by making an appointment with a counselor, with the encouragement of his mother.

Andrew's Career Counseling Sequence

Let us begin with the initial interview as a means of understanding Andrew's problem from a qualitative perspective. Andrew and the counselor communicate or interact with the problem—the first step of the CASVE cycle presented in Chapter 2. The approach to working with Andrew is outlined according to the seven-step service delivery model initially outlined in Chapter 7.

Initial Interview

A readiness assessment interview allows Andrew's problem to be analyzed in terms of the characteristics of career problems presented in Chapter 1. The career resource center's policy is that an individual appointment will be scheduled if sought by a prospective client. If the client and the counselor subsequently agree that individual counseling is not needed, the client will be referred to brief-staff assisted or self-help services. Fifty minutes were reserved for the initial interview and preliminary assessment. Andrew arrives for his appointment and meets Sunita Bhatt, a Certified Career Counselor with a master's degree in counseling who works as a staff member in the career resource center.

Sunita began the session by asking Andrew, "What brought you in to see me today?" Andrew responded by saying, "I'm having a real hard time making a choice about what I am going to do in the future. And this career thing is really beginning to stress me out." In addition to the background information presented previously, Sunita also proceeded to gather more information about the nature of Andrew's career problem.

Gap. Andrew enjoys the comfortable lifestyle that has resulted from his parents' economic success. He has observed the respect that his mother receives as a result of starting and maintaining a successful business, and the respect his father receives for his professional attitude and commitment as a police officer. Andrew, too, would like to achieve respect as a result of his employment. Andrew admires his mother's ability to be decisive and the way she achieves her goals. He also admires the independence his mother has at work and the self-reliant attitude his father has toward his work and avocational activities. Andrew becomes anxious and then depressed when he perceives the gap between what he wants out of work and what he is receiving from his present job and future prospects.

Andrew's best friend accepted a full-time job immediately after graduation as an assistant produce manager at the grocery store where he and Andrew worked the previous summer. Andrew often visits the apartments of two of his high school friends who also graduated last year and are now working full-time in entry-level, semi-skilled jobs. He is painfully aware of his friends' lower standard of living in comparison with that of his parents. Andrew also perceives his friends' work as not providing the level of respect and independence he wants. Finally, he

does not view himself as having the characteristics of decisiveness and self-reliance demonstrated by his mother.

> *Counselor hypothesis:* Andrew senses a considerable gap between his real state of affairs (low-paying job, low self-respect, indecisive) and his ideal state (higher status, greater independence, more self-respect, more decided).

Ambiguous and Complex Cues. Andrew has been receiving numerous cues from his environment about his career problem. Andrew's best friend has been pressuring him to work at the grocery store and to share an apartment and expenses. His friend said, "We can save money by sharing expenses and have a great time at work together just like we did last summer." Andrew's other high school classmates are either attending college or working full-time. Many of his friends appear confident in their ability to succeed. His mother often talks about his lack of concrete plans. At times, she asks, "Andrew, what are you going to do with your life? Your father and I want to help you, but you've got to decide on something." Sometimes, in frustration, she says, "You're never going to amount to anything by sitting around all the time playing video games!"At this point, he usually retreats to his room anxious and depressed. His father, on the other hand, rarely mentions his opinion of Andrew's lack of direction; however, he often states that joining the army when he was Andrew's age was an important turning point in his life.

> *Counselor hypothesis:* Andrew has been receiving considerable input, some of it conflicting and much of it confusing. He is trying to please himself, his best friend, and his parents—all at the same time.

Interacting Courses of Action. In attempting to solve his problem, Andrew is faced with several possibilities. He perceives three options to solving his problem.

1. To drop out of community college and find any employment that offers on-the-job training.

2. To continue his education at the community college, which will lead to one or more specified occupations.

3. To enter the military and receive specific training that would lead to employment after he completes his tour of duty.

> *Counselor hypothesis:* At this point, none of Andrew's options appear very appealing or promising. Each alternative has advantages and disadvantages for him; there is no clear first choice. He could possibly combine two of the three options to form one or two further alternatives.

Unpredictability of Courses of Action. In considering his three options, Andrew finds it difficult to predict how successful he might be with each one. His uncertainty may be caused by his lack of self-confidence or his lack of knowledge about himself or the world of work. For instance, although he has worked at the grocery store, he is unsure what it would be like doing that type of work forty to fifty hours a week. He is also unsure what it would be like to live with his friend instead of his family. Although he is passing his present courses at the community college, he is worried that future courses might be too difficult or too boring. Although his father served in the military and talks positively about his experience, Andrew knows little of what military life is like. He's not sure how he would cope if he were hundreds of miles from his family.

> *Counselor hypothesis:* Andrew's lack of confidence in his ability to be a good decision maker further complicates his problem. This lack of confidence is made worse by his lack of specific knowledge about himself and the world of work. When he is particularly anxious about deciding, he often copes by delaying until only one option remains.

Solutions Present New Problems. Even if Andrew selects one of the options just described, new problems become apparent. In the initial interview, Andrew asked rhetorically, "If I should decide to work at the grocery store, will I be more successful as a stock clerk, where I have some experience, or would it be better to seek more training and become a cashier? Or should I go to work as an apprentice butcher? What if the store doesn't need additional staff right now? If I decide to continue my education, what course of study should I choose? Should I go to a university in my hometown, or should I leave home? If I leave home, how will I pay for all my expenses? I could work part-time, but what kind of work would I do? If I join the army, which training program should I choose? Will I be able to get a civilian job with a skill I learn in the army? Will my choice of training affect where I'll be living while I'm in the service?"

> *Counselor hypothesis:* Andrew is reflecting the fact that by making an initial choice he will then be faced with numerous subsequent choices, which adds to his anxiety. He believes that things will improve after making his decision, but it seems that right now he is even more confused than before.

> *Counselor's interview summary:* Andrew has become aware that his personal resources and the resources of his family and friends are not helping him solve his career problem. He lacks a clear understanding of his values, interests, skills, and employment preferences. His knowledge of occupations, educational options, and training programs is simplistic and sometimes inaccurate, often due to stereotypical beliefs. His decision-making skills seem to be poorly developed, and he doubts his ability to be an effective decision maker. Andrew appears at this point to possess many of the attributes of being indecisive. He can list alternatives, but they seem to be random and unrelated.

Preliminary Assessment

Based on information gained from the initial interview and the preliminary assessment, Sunita should now be able to determine Andrew's readiness for beginning the career problem-solving and decision-making process. To maximize her effectiveness, the counselor attends to the development of a facilitative counseling relationship (Reynolds et al., 2023; Tang, 2019). At this point, it is important to know if Andrew is ready to begin using assessment instruments and career information resources, or if there are other issues that need to be addressed first, such as negative self-talk that may be making decision-making more difficult.

Sunita began by reviewing with Andrew the results of the *Career Thoughts Inventory* (CTI) (Sampson, et. al, 1996a), which he completed prior to his first counseling sessions as part of the intake process. As described in Chapter 8, the CTI (Sampson et al., 1996a) is a self-administered, objectively scored measure of negative thinking in career problem solving and decision-making that is based on CIP theory.

Andrew received a CTI Total score of 88 (2.0 standard deviations above the mean), a Decision-Making Confusion score of 26 (2.0 standard deviations above the mean), a Commitment Anxiety score of 19 (1.0 standard deviation above the mean), and an External Conflict score of 8 (2.0 standard deviations above the mean). These scores indicate that in

comparison to the norm group of college students, Andrew has many negative thoughts about making a career choice. More specifically, he is very confused about how to make a career choice, is somewhat anxious about making a commitment to a choice and is having difficulty reconciling his views about the future with his parents' expectations. Sunita also determined Andrew's readiness by encouraging Andrew to share his view of the problem and of himself. Specific CTI items that Andrew agreed or strongly agreed with (Sampson et al., 1996a) were used as a focal point for this discussion.

The CTI results confirmed some of the information obtained in the initial interview. Sunita concluded that, because of his considerable confusion about career choice, his anxiety about making a commitment (low capability), and the conflict he was experiencing with his parents (moderate complexity), Andrew had low readiness for career decision-making, and individual career counseling would be more appropriate for Andrew than self-directed interventions. Although group counseling with other indecisive individuals could be particularly useful, no such groups are currently available. Andrew's situation clearly meets the criteria for use of individual career counseling as an appropriate intervention strategy (Sampson et al., 2020; Sampson et al., 2004). Sunita shared her perceptions with Andrew and asked him if he agreed. He said that he did agree and thought that individual counseling sounded like a good idea.

To help orient Andrew to the process they would use in career problem solving and decision-making, Sunita referred Andrew to two online resources: (a) the client version of the pyramid of information processing domains ("What's Involved in Career Choice") and (b) the client version of the CASVE cycle ("A Guide to Good Decision Making") (Sampson et al., 1992; Sampson et al., 2020). Sunita briefly explained the concepts contained in the resources and told Andrew that they would be referring back to the resources to help him keep track of where he was in the problem-solving and decision-making process, as well as learn more about this process.

Define Problem and Analyze Causes

Sunita summarized Andrew's problem as a gap between being frustrated and discouraged by his uncertainty about his future and wanting to be confident about a choice and making progress in his career. Sunita asked Andrew if this was a good summary of his situation, and Andrew agreed that it was. Andrew and Sunita then analyzed his problem to identify probable causes of the gap. Sunita suggested (and Andrew agreed) that his problem involved (a) a lack of confidence in his decision-making ability and (b) a lack of information about himself, the world of work, and the decision-making process. The counselor helped Andrew to frame his problem as a lack of confidence and of information and skill, both of which can be rectified, rather than as his being an ineffective decision maker, which would imply that there was something basically wrong with him.

Formulate Goals

Andrew and Sunita collaborated to arrive at the following goals for counseling:

1. To understand what Andrew does to help and to hinder his problem-solving and decision-making process (metacognitions)

2. To clarify Andrew's knowledge of himself (self-schemata) and his knowledge of occupations (world schemata)

3. To improve Andrew's decision-making skills (generic information processing skills)

The goals established by Andrew and Sunita become the basis for developing an Individual Learning Plan (ILP) to guide the selection and use of career information resources (see Figure 12.1). The ILP has the advantage of providing the client with a general understanding of the sequence and scope of career counseling, thus reducing the likelihood of misunderstandings and the development of unrealistic expectations. It also encourages the client to assume an active role at an early stage in the counseling process. Sunita referred back to the client version of the pyramid of information processing domains (Sampson et al., 1992; Sampson et al., 2020) to show how Andrew's goals related to the process of career decision-making.

The goals identified by Andrew and Sunita are best viewed as short-range goals. Achieving these goals will help Andrew achieve the ultimate goal of making an informed and appropriate career choice as he learns how to be a better career problem solver and decision maker (which are the aims of CIP theory).

Figure 12.1

Andrew's Individual Learning Plan (ILP)

Individual Learning Plan

Goal(s)
1. Clarify interests and explore full-time opportunities that offer financial stability
2. Increase confidence in decision-making skills to become a more decisive decision maker
3. Identify and reframe negative thoughts

Activity	Purpose/Outcome	Time Needed	Goal #	Priority
Schedule individual career counseling	To explore job opportunities, decision-making skills, and reframe thoughts	10 minutes	1-3	1
Review items agree and strongly agree on the CTI and reframes in the CTI Workbook on pp. 15-23	Reframe negative thoughts	60 minutes	3	2
Review FOCUS2 occupational information	Clarify self-knowledge and explore options	45 minutes	1 and 2	3
Complete the CASVE-CQ	Assess progress in decision-making	10 minutes	2	4
Complete the virtual occupational card sort	Clarify self-knowledge of self	40 minutes	1	5
Complete SDS	Explore options & increase confidence in decision-making skills	30-45 minutes	1 and 2	6
Complete the Guide to Good Decision-Making Exercise	Increase confidence in decision-making skills	40-60 minutes	2	7
Complete an information Interview	Clarify knowledge of options	60 minutes	1	8

This plan can be modified by either party based upon new information learned in the activities of the action plan. The purpose of the plan is to work toward a mutually agreed upon career goal. Activities may be added or subtracted as needed.

Andrew _____   _Sunita_ _____

Student/Client   Date   Career Advisor   Date

Develop Individual Learning Plan

With Andrew's general goals for counseling in mind, Andrew and Sunita proceeded to further develop the Individual Learning Plan (ILP). For each counseling goal, they planned activities and their purposes were listed; the activities were ranked according to priority. As noted in Chapter 7, the ILP is used to guide and to monitor the career counseling process. It is

flexible and can be modified as new data becomes available. Sunita's support serves to enhance Andrew's motivation as he completes various learning activities. By involving Andrew in the creation of an ILP, Sunita encourages his active participation in the counseling process. By seeking Andrew's opinion on how to progress through the counseling process, Sunita is creating the conditions to challenge Andrew's dysfunctional belief that he is bad at making decisions. A relatively small number of learning activities were assigned initially—the ILP originally contained three activities, and other activities were added as the counseling process continued—so that Andrew did not feel overwhelmed by the amount of work to be done.

Execute Individual Learning Plan

The first counseling goal for Andrew is to learn what he does to help and to hinder his problem-solving and decision-making process. This is achieved by making him more aware of his metacognitions as reflected in his CTI results.

Executive Processing. Sunita began the next session by reviewing Andrew's ILP, reinforcing his schema for how the counseling process will proceed. She then asked Andrew to talk about what he thinks of himself and his situation. The majority of Andrew's self-statements were negative. Sunita then explained how negative thoughts could result in feelings of anxiety and depression (Beck, 1976; Beck et al., 2022). She disclosed how some of her own negative thought processes occasionally limited her effectiveness as a decision maker and increased her own feelings of anxiety. After she was confident that Andrew understood how negative self-statements impede problem solving and decision-making, she asked Andrew to describe a recent decision he had made that was accompanied by anxiety.

Andrew described buying a birthday gift for his mother. The choice took several days and involved significant anxiety; he finally selected a book on gardening. Sunita then helped Andrew to identify what he had been thinking in relation to his decision-making process and how his self-talk contributed to his anxiety. Sunita suggested that before the next session, Andrew should complete the first two sections of the *CTI Workbook* (Sampson et al., 1996b) to help him learn more about how his thoughts influenced his ability to make a career choice and to complete Section 3 of the workbook, which includes an exercise that was designed to help him identify, challenge, and alter cognitive distortions.

At the beginning of the next session, Andrew reviewed his homework exercise from the *CTI Workbook* (Sampson et al., 1996b) with Sunita. A consistent pattern of cognitive distortions and subsequent anxiety began to emerge. Andrew often anticipates that his decisions will lead to bad consequences in the future. He is sure that significant others believe he is incompetent in making decisions and successfully completing tasks. He constantly compares himself to very successful people, magnifying their good qualities and minimizing his own abilities.

Andrew began to understand that his negative self-statements contributed to his anxiety in general and to his difficulties with career problem solving. He had concluded that he would not be successful in various occupations even though he knew little of the actual work tasks and had no specific experience that suggested that he would fail. He had decided that, because of his vision problems, no occupational specialty in the military would be an appropriate choice (overgeneralization). He had exaggerated the deficiencies of his academic achievement and assumed that it prevented his admission into good colleges (magnification). He also had

concluded that if he did not get a really good job, he could not be happy working (all or nothing thinking).

Andrew is prey to the "crystal ball myth." Lewis and Gilhousen (1981) stated that "the crystal ball myth suggests that people who 'have it together' always have clear, concise plans for their lives at all times" (p. 296). This assumption not only contributes to Andrew's feeling of inadequacy as a decision maker but also results in feelings of depression, as Andrew imagines that the situation is not likely ever to get better. In closing the session, Sunita suggested that perhaps the problem is not who Andrew is, but rather how Andrew thinks about himself and how Andrew believes the world functions. She asked him to continue with his cognitive-distortions exercise, but this time Andrew is to do the exercise while making three important decisions during the week.

At the beginning of the next session, Andrew admitted that he had used a variety of cognitive distortions related to important decisions during the week. However, he did not feel as anxious for as long a time because he had recognized what he was doing and had attempted to substitute more positive thoughts. Andrew then asked Sunita, "I understand how my thoughts relate to my feelings, but why am I so negative all the time?" Sunita said she believed that Andrew's negative point of view could be related to his assumptions about himself and the way the world operates.

Beck et al. (2022) and Krumboltz (1983; 1992) suggested that inaccurate self-observation generalizations or worldview generalizations contribute to career decision-making problems. Sunita perceived that two of Krumboltz's five consequences of unfounded beliefs relate to Andrew. First, Andrew fails to exert the effort needed to make a decision or solve a problem. "It is easier to avoid than to face decisions. . . ." Beliefs such as these inhibit constructive action, discouraging people from exploring alternatives and actively seeking information, opinions, or advice that might lead them to consider new directions" (Krumboltz, 1983, p. 3). Second, Andrew suffers anxiety over a perceived inability to achieve goals; this inability is linked to feelings of low personal worth. "If I choose the wrong job here, it will be awful and I will have ruined my life. . . . People who link their feelings of personal worth to specific experiences in life create potential misery for themselves" (Krumboltz, 1983, p. 5). Sunita hypothesized that the following factors identified by Krumboltz may contribute to Andrew's beliefs:

1. *Self-comparison with a single standard*: "My dad didn't have any problems choosing an occupation. He always knew that he wanted to be a police officer."

2. *Self-deception*: "The reason I'm having trouble choosing an occupation is that I'm not good at making decisions!" In reality, Andrew was afraid of failing on the job, but he found it too embarrassing to admit this to himself or others.

Irrational beliefs can also contribute to problems in career decision-making (Beck et al., 2022; Ellis, 1967). Sunita perceived that Andrew had the following irrational beliefs:

1. It is absolutely necessary for an individual to be loved or approved of by every significant person in their environment.

2. It is necessary that each individual be completely competent, adequate, and achieving in all areas if the individual is to be worthwhile.

3. It is easier to run away from difficulties and self-responsibility than it is to face them.

4. Individuals need to be dependent on others and have someone stronger than they are to lean on.

5. Past events in a person's life determine present behavior and cannot be changed. There is always a correct and precise answer to every problem, and it is catastrophic if that answer is not found.

Sunita asked Andrew to evaluate these beliefs.[58] At the next session, Andrew admitted that they did not make much sense and that they directly related to his decision-making problems. Sunita asked Andrew to check out these beliefs in the real world. Because Andrew has stated that he can talk with his mother easily, Sunita suggested that for two important decisions during the week, he should (a) monitor and correct his cognitive distortions and (b) check out the appropriateness of his underlying beliefs with his mother. Sunita received Andrew's permission, via a Release of Information form, to contact his mother and provide her with the information necessary to complete the assignment.

At the following session, Andrew reported that he now understands that his decision-making problems are not necessarily a result of his incompetence, but rather a result of his beliefs. His mother was very understanding and supportive of his efforts to change. Andrew's father was also encouraging and suggested that Andrew practice his decision-making skills by creating a potential itinerary for the family summer vacation.

Sunita asked Andrew to complete the CASVE-Cycle Questionnaire (see more in Chapters 7 and 8) to assess the activities or ideas he has already engaged with regards to his career decision. Sunita explained they can use the CASVE-Cycle Questionnaire to continue to track Andrew's decision-making progress as they work together by checking off new tasks he completes as he progresses in his decision. After Andrew answered the CASVE-Cycle Questionnaire items, Sunita worked with him to complete the Progress Tracker. By filling in the spaces on the Progress Tracker that indicate progress across the different CASVE phases, Andrew could visually see where he had already made progress in his career decision and where there was progress to be made. Given Andrew's prior work on his thinking and his efforts to seek support in his career development, the Progress Tracker showed he had made substantial progress in the Communication phase but little progress in the others phases of decision-making. Sunita then asked Andrew to complete Section 4 of the *CTI Workbook* (Sampson et al., 1996b) to help him learn about the content and process of career decision-making from a CIP theory-based perspective. (Discussion of other decision-making strategies is provided in Chapter 2). After completing Section 4 of the workbook, Andrew was more inclined to perceive himself as knowing how to solve problems and make decisions, and as a result, be more confident as a decision maker. This demonstrates the important relationship between changes in attitude and changes in knowledge. As Andrew becomes more confident in his capabilities, his increased knowledge can lead to a more positive attitude, as well as decreased symptoms of anxiety and

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[58] Weinrach (1980) and Dryden (1979) provided specific examples of the use of Ellis's ABC theory in disputing irrational beliefs related to career decision making. An alternative cognitive-behavioral intervention would have involved identifying ways that Andrew disowns responsibility for his career indecision; identifying the prices paid for that indecision; learning to face the fear associated with making a commitment; owning responsibility for his career choice; making a firm commitment—for example, to test career decision-making skills; and taking specific action to initiate the career decision-making process (Hornak & Gillingham, 1980).

depression. During counseling, Sunita provided positive reinforcement of this insight for Andrew.

Over the next week, Andrew used what he had learned from the *CTI Workbook* (Sampson et al., 1996b) to make some initial decisions about the vacation itinerary. At the beginning of the next counseling session, he reported that he wanted to try to transfer his improved problem-solving and decision-making skills to his career problem. Sunita used this opening to discuss the process of career problem solving and decision-making by reviewing the client versions of the CASVE cycle and the pyramid of information processing domains (Sampson et al., 1992; Sampson et al., 2020). She explained they could refer to the incomplete CASVE-Cycle Questionnaire items to generate ideas for areas to work on that may help Andrew progress toward a satisfying career decision.

Analysis (Self) and Synthesis (Elaboration). Although Andrew was now better prepared to think more positively about himself and his career options, he still had considerable difficulty in articulating self-knowledge and admitted to having little accurate information about the world of work in general which was reflected in his Analysis score on the CASVE-Cycle Questionnaire. Sunita suggested to Andrew that additional assessment strategies would now be an appropriate step to foster self-knowledge and career exploration. After providing Andrew with an overview of the assessment process, Sunita actively involved Andrew in the assessment decision-making process, encouraging him to see himself as a capable decision maker as well as providing a verbal model of the cognitive aspects of the decision-making process. Andrew and Sunita summarized his needs as follows: Andrew needs to clarify and organize his self-knowledge (values, interests, skills, and employment preferences) to provide a basis for expanding the occupational alternatives being considered (Synthesis-Elaboration) and narrowing them to a manageable number for further consideration (Synthesis-Crystallization).

Sunita asked Andrew to describe his previous assessment experiences. Andrew said that he becomes very anxious when taking tests and that he did not learn very much from the interest inventory and aptitude test that he took at the end of his junior year in high school. Andrew said that the interpretation was confusing, and he remembered little of what was said. Sunita reviewed with Andrew the data from the score reports from the interest and aptitude assessments that he had brought with him. The interest assessment data were undifferentiated, with no apparent trends in the occupational scales. The inventory showed a high percentage of indifferent responses, which reflected Andrew's indecisiveness at the time. The results of the aptitude battery indicated that Andrew's mathematical skills were more developed than his verbal skills. These results were consistent with his past grades in mathematical and verbal subjects. On the basis of Andrew's past negative experience with testing, Andrew and Sunita decided to begin with a virtual occupational card sort (Osborn, 2022), with additional instruments selected as needed.

Sunita then showed how to access the card sort online and then explained the procedures for using the card sort. In noting the benefits of card sorts, Osborn and Bethel (2009) and Osborn, et al. (2015) describe the influential impact of card sorts dating back to the 1960s. Dolliver (1969) stated that "the counselor can gain an understanding of a client's processes in making choices, as well as identifying the elements which the client uses to make those choices" (p. 153). See Belser et al. (2023), Osborn and Zunker (2016), and Stolz and Barclay (2019) for a description of other card sorts that might be used in career counseling.

After Andrew had sorted the cards into "might choose," "uncertain," and "would not choose" categories, Sunita observed that in comparison with his interest inventory responses, Andrew was using the uncertain category much less often. When asked for his reaction to this observation, Andrew stated, "I feel more confident now about my ability to choose. Before, I was focusing more on my uncertainty about choosing rather than on actually having preferences. Now I realize that there are things that I really do like and dislike."

In talking about his reasons for rejecting many of the occupations, he stated, "I don't want to work in a job where I have to deal with people—like helping them with their problems. I like having friends and all; I just don't want to work with people all the time. I also don't want a job that means I have to be in school for a long time, like going to grad school or anything like that. I also don't like doing the same thing over and over again."

In talking about his reasons for identifying certain occupations as "might choose," Andrew stated, "I like the idea of working with my hands and using math in some way in my job. I like it when things are orderly and precise. I also like understanding how things work. Having some variety in what I do would also be nice. And some of these occupations would let me work outdoors."

To help clarify and organize Andrew's self-knowledge, he and Sunita decided to complete a brief guided imagery activity (Marshall & Farrell, 2019). Visualization is a cognitive behavioral method, and evidence suggests that it is an effective treatment for reducing symptoms such as insomnia, anxiety, and depression (Aldahadha & Bani Mustafa, 2022). Andrew imagined events during a typical day 10 years in the future (Aldahadha & Bani Mustafa, 2022; Morgan & Skovholt, 1977). Andrew vaguely described his job as "working outdoors with my hands"; his leisure activities involved spending time with his family, fishing, or woodworking. Andrew stated, "Taking my kids on a fishing trip, like Dad and I used to go on, would be really great!" In reflecting on his fantasy, Andrew stated, "What I did away from the job seemed as important as what I did at work. I never thought that my leisure time meant so much to me. I do spend a lot of time at school daydreaming about fishing or building my own boat. I don't want a job that has a lot of long hours, like owning my own business the way Mom does. She works almost all the time!"

When asked if he felt they were making progress, Andrew said he was getting more confident that he knew what he wanted out of a job, but he was not sure how appropriate his list of occupations was for him. Sunita suggested that he complete the Self-Directed Search (SDS), which is designed to help him learn more about himself and identify potential occupational choices (Holland & Messer, 2017).[59] Sunita then used the client versions of the pyramid and the CASVE cycle to clarify the progress that Andrew had made in solving his career problem. The session ended with Sunita sending Andrew an email with a link to complete the SDS through the center's website after Andrew set up a profile.

Andrew completed the SDS and was emailed his report, which he read before his next session. He also began exploring O*NET on his own to learn more about some of the occupations (U. S. Department of Labor, 2022). Prior to beginning the session, Sunita reviewed Andrew's SDS report including the professional summary to prepare for Andrew's test

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[59] Other instruments that could have been used to help Andrew learn more about himself and identify potential vocational choices are described by Stoltz and Barclay (2019).

interpretation. After Sunita asked Andrew to describe his experience with the SDS, which was positive, they discussed his results. Andrew's SDS RIASEC code was IRE (Investigative, Realistic, and Enterprising), confirming the results of the card sort activity. They also reviewed O*NET as a way to view more detailed information about the occupations. Andrew stated that he had already begun exploring O*NET and found it very useful. The consistency level of the IRE code was high, which indicated that commonalities existed among the types of activities inherent in the work environments represented by the I and R types. The differentiation among types was average, indicating some distinct likes and dislikes; this was an improvement over the lack of differentiation shown in Andrew's previous interest inventory results. The congruence between his SDS occupational daydreams and his SDS final score was high, which indicated a similarity between his expressed and measured interests that enhanced the concurrent validity of the results (similar data produced by multiple assessments). A definite trend existed in the data from the interest inventory, card sort activity, and SDS-Client Interpretive Report, with Investigative, Realistic, and Enterprising types being prominent.

Sunita asked Andrew to write a summary of his self-knowledge as homework, using his card sort results and his SDS-Client Interpretive Report as a stimulus. The summary statement would be organized as follows:

1. Identification of values

2. Identification of interests
3. Identification of skills

4. Identification of no more than five occupations for further exploration[60]

Using the client versions of the pyramid of information processing domains and the CASVE cycle along with Andrew's CASVE-Cycle Questionnaire results, Sunita then showed Andrew the progress he had made to date in problem solving and decision-making. Using a new font color, they filled in new segments of the Progress Tracker based on CASVE-Cycle Questionnaire items Andrew now positively endorsed that had previously been left undone. Andrew commented it was nice to see the progress he was making on paper.

At the beginning of the next session, Andrew presented Sunita with his summary. He had identified the following five occupations for further exploration: forester, land surveyor, landscape architect, computer programmer, and police officer. He had added police officer (which did not appear on his earlier "might choose" list), as he was familiar with the occupation because of his father. Sunita and Andrew then reviewed his ILP in terms of the client version of the CASVE cycle (Sampson et al., 1992; Sampson et al., 2020) in order to discuss his progress and refine the learning activities associated with obtaining and using career information. Andrew reported that he was pleased with his progress, especially because prior to their first counseling sessions, he had not expected counseling to be helpful. Sunita agreed that progress had been made and said she was pleased with Andrew's progress and the quality of their relationship.

Analysis of Occupations. In helping Andrew formulate a plan for obtaining and using career information, Sunita suggested two basic steps: (a) reviewing general information on how the world of work is structured, to help Andrew discern differences among occupational

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[60] Shahnasarian and Peterson (1988) demonstrated that individuals are able to consider effectively only three to five occupational alternatives at one time.

categories and also to enhance his later recall of information; and (b) reviewing specific information on occupations and educational or training opportunities to help Andrew narrow his list of alternatives to tentative primary and secondary choices. These two steps provide Andrew with a cognitive schema for understanding how to use occupational information. Sunita shared with Andrew the Guide to Good Decision-Making Exercise to use in managing the self-knowledge information he generated in his homework activity and the information he was obtaining on his options. All of this content can provide a basis for further evaluation of his options in the CASVE cycle Valuing phase. By helping Andrew formulate a concrete, sequential plan for obtaining and using information, the counselor enhances the likelihood that Andrew will view himself as capable of success instead of feeling overwhelmed with the task and unsure of where to begin.

An important role for Sunita at this point in the counseling process is to help Andrew select appropriate career information materials (Brown, 2014), taking into account (a) the way in which the information is presented (Herr & Cramer, 1996); (b) the reading level of the information (Brown, 2014; Herr & Cramer, 1996); and (c) the amount of information in relation to Andrew's motivation (Brown, 2014). For Andrew, Sunita had concluded that (a) the information should be very interactive initially, progressing to noninteractive materials when he requires more specific and detailed data; (b) the reading level should be no more than ninth grade in view of his lower scores related to verbal skills ; and (c) the amount of information should be limited at first so it will not overwhelm him, with additional information introduced at a pace selected by Andrew.

Andrew's next task is to identify specific sources of career information located in the career resource center. He uses a computer in the center to search for career materials (Career Key, 2019; see Chapter 18 for more information on Career Key). This type of system is designed to reduce the common frustrations that clients experience when trying to locate specific career information among the vast, often overwhelming amount of data available (Epstein & Lenz, 2008; Sampson, 2008). See Chapter 18 for a more detailed discussion on organizing career resources. Andrew began by selecting five occupations he was considering. The computer searched the database of current materials and generated a list of available materials.

Sunita suggested that Andrew review the Holland's typology contained in his SDS Interpretive Report to provide a framework for organizing and evaluating information on specific occupations (Shahnasarian & Peterson, 1988). Research on counselor intervention and information use suggests that the client's interest in a particular source of information will tend to be greater if the counselor explains how the material is relevant to solving the client's career problem (Sampson, 2008).

Synthesis (Crystallization). Sunita reminded Andrew that he had initially indicated no progress in the Synthesis phase per his responses to the CASVE-Cycle Questionnaire. She pointed out his earlier work in the Analysis phase had probably contributed to his progress in this area as it related to CASVE-Cycle Questionnaire items such as, "I can identify multiple jobs that match my career interests." Sunita next suggested that Andrew use a computer-assisted career guidance system to learn about typical work tasks, educational or training requirements, the amount of contact with people, variety, leisure time, hours worked in a typical week, and outdoor work for the occupations he is considering. As Andrew completed this task, Sunita recommended that he think back to what he learned from completing the card sort activity. Sunita suggested that Andrew begin with the five occupations on his list and then explore any

other occupations that seem interesting. In this way, the task is small enough to be manageable, but the breadth of his exploration is unrestricted. At the end of the session, Sunita briefly discussed where Andrew was in the problem-solving and decision-making process by reviewing the client versions of the pyramid of information processing domains and the CASVE cycle (Sampson et al., 1992; Sampson et al., 2020). Sunita noted exploring occupations using the computer system could lead to substantial progress in the Synthesis phase given CASVE-Cycle Questionnaire Synthesis items such as "I can compare my career or job options based on information I have gathered about them."

At their next session, Andrew reported to Sunita that he enjoyed researching occupations online. Using the Guide to Good Decision-Making Exercise, he had narrowed his alternatives to two occupations: land surveyor and computer programmer. When Sunita asked about his reasons for selecting land surveyor and computer programmer, Andrew stated that these two occupations would provide him with some variety and opportunity to solve problems but would not require extensive education. Sunita said she was pleased that Andrew was able to make progress in evaluating his alternatives. Andrew replied, "I'm really interested in learning more about becoming a land surveyor or computer programmer." Sunita's verbal acknowledgment of Andrew's information-seeking statements further reinforced his information-seeking behavior (Connelly & Reardon, 2020; McHugh et al., 2012; Sampson, 2020).

Sunita now suggested that Andrew revise the occupational information exploration plan in his ILP to include interviews with a local computer programmer and a land surveyor. If the interviews were successful, it would be useful to follow up by observing the work tasks (shadowing) of a local computer programmer or land surveyor.

Andrew said, "It all sounds good to me, but where do I start?" Sunita suggested that he first view his FOCUS2 information for each occupation. She offered several websites including an information handout on informational interviewing (CareerOneStop, 2023) to help him identify well-focused questions to ask in the interview. If he concluded that one or both occupations were worth further consideration, then a more intensive shadowing experience could help him gain additional detailed information. Sunita suggested that he become familiar with the content of the printed materials and then refer to them for answers to specific questions, rather than use them for general reading. By providing Andrew with alternatives and discussing the rationale for his planned use of information resources, Sunita helped to reinforce Andrew's positive self-image as a decision maker and to develop his schema for understanding the problem-solving and decision-making process. As the session ended, Sunita again briefly reviewed the client versions of the pyramid of information processing domains and the CASVE cycle (Sampson et al., 1992; Sampson et al., 2020) to clarify where Andrew was in his problem-solving and decision-making process. Together they indicated some new progress in the Synthesis areas by endorsing new items on the CASVE-Cycle Questionnaire. This emphasized to Andrew the progress he was making as he worked hard to learn more about his options.

Since Sunita was busy assisting another client, Jerrell Robinson, a career counseling major working part-time as a paraprofessional career advisor in the career resource center, helped Andrew review his FOCUS2 reports for "Computer Programmer" and "Land Surveyor." After discussing the occupational information he found, Jerrell helped Andrew check wording with his analysis of the differences between the work tasks in these two occupations. After reviewing the resources, Andrew commented to Jerrell: "I really liked what was said about the computer programmer writing programs to solve problems. But on the other hand, it seems like

land surveyors move around a lot more. A computer programmer spends a lot of time at a desk." Jerrell suggested that Andrew could clarify his reactions by asking a computer programmer and a land surveyor how they spent a typical working day.

CareerOneStop (2023) suggested that vicarious role assumption is an important aspect of using occupational information. Clients picture themselves in the work environment, estimate how successfully they can meet the demands of the occupation, and imagine the potential job satisfaction from working. An information interview, especially when conducted at the work site, provides substantial realism, and facilitates the client's vicarious role assumption.

When Andrew said he felt that he was ready for an information interview, Jerrell then helped Andrew search the career resource center's mentoring database to identify potential contacts for information interviewing. They discussed formulating emails to inquire about the availability of scheduling interviews with Andrew virtually. Jerrell helped Andrew briefly role play what it would be like to conduct the information interview to help Andrew gain confidence with this new skill.

Valuing. Andrew completed two interviews with individuals who had experience in computer programming and land surveying, and returned to talk with Sunita at a scheduled counseling session. He stated: "After talking with the computer programmer and the land surveyor, I think that being a surveyor would be my best choice. Before the interviews, I was leaning toward computer programming, in spite of sitting in front of a computer screen all day. But then the programmer shared with me some of the courses at the community college. What I figured out was that I like using computers, but I don't think I would like to take all of the programming courses. Anyway, when I talked to the land surveyor, he said that he used computers to schedule jobs, update job status, enter data from surveying sites, process financial records, and even do some graphics work. As a surveyor, I would use the computer to help me do my work, instead of writing programs to help someone else do their job. And I can also work indoors and outdoors."

Sunita asked Andrew if negative or irrational thinking had played a part in his problem solving. After some thought, he replied, "I really liked it when the computer programmer talked about solving problems that other people were having trouble with. My parents think computer programmers are real smart. I really want to prove myself, to show people I can get the tough jobs done! But that's thinking about what others want me to do, and not so much about what I want to do. It seems like I still slip back into those old ways of thinking pretty easily. It would have been a bad choice to start taking computer programming courses if all I wanted to do was prove myself to others. I can do that just as well, or better, as a surveyor, and enjoy working a lot more. Given what I know about myself now, forester would be a good second choice, in case land surveyor doesn't work out."

Sunita asked, "how well does being a land surveyor match your values, interests, skills, and employment preferences?" Andrew said, " I believe it is a good fit overall, except that it would be a while before I could get involved with the computer software tools of the business. I would have to learn the basics first." They discussed how Andrew's leisure time could be used to supplement his work activities. Needs that are not met at work can be supplemented by pursuing supplemental activities during time allocated to leisure pursuits (Reardon et al., 2022). When asked how he might approach this, Andrew said that he might try taking a coding course for fun and continue playing video games in his free time. He could also spend some of his leisure time

fishing or woodworking. Sunita and Andrew again returned to the CASVE-Cycle Questionnaire and noted several Valuing items Andrew could now complete such as, "My career choice fits well with my lifestyle."

Execution. Andrew needs to determine how to implement his decision. Sunita asked Andrew to identify, through brainstorming, some of the factors involved in implementing his first choice. Andrew developed the following list:

- Choosing an educational program for land surveying

- Paying for school

- Deciding where to live

- Getting a job after graduating

A degree in land surveying is available from numerous community colleges and four-year institutions. A computer search of college programs indicated several programs available in Andrew's home state. A community college within commuting distance of the city where he lived had a two-year program in land surveying leading to an associate degree. Andrew made an appointment with an academic adviser at the community college to gain specific details on admissions and the nature of the surveying program.

The feedback that Andrew received from his parents has been positive. Both have had personal experience at a community college, and they are confident that Andrew has the ability to succeed in obtaining an associate degree. They are also pleased that he can remain in the area while attending school. Andrew's parents continue offering help with funding for his community college degree. They offered to pay all his direct educational expenses, such as tuition, books, lab fees, and equipment. They also agreed to pay for the gasoline needed to commute to and from school. As in the past, Andrew will be responsible for working for his own spending money. If Andrew decides to move out of the house, he will have to cover all of his room and board expenses because these costs are optional and fully under his control.

Sunita suggested that Andrew might want to seek employment in a minimum-wage position with a land surveying company. During an information interview with a local surveyor, Andrew was encouraged to call if he was interested in employment. When Andrew followed up on this opportunity, he obtained a job as a general office assistant. Although he would make more money by working at the grocery store, the opportunity to gain direct experience offsets the lower pay. He plans to live at home for the first semester at the new community college, save his money, and then share an apartment with his best friend during the second semester. With regard to getting a job after graduation, Sunita briefly explained the career planning and employment services available at community colleges.

Andrew was still concerned, however, about his father's "real" opinion about his choice of surveying given the conflict that occurred when he was considering joining the army as an enlisted soldier. Sunita encouraged Andrew to address his concerns with his father, especially because his father appeared pleased with Andrew's choice of surveyor. When they talked, Andrew learned that his father's negative reaction to his considering being an enlisted soldier actually had little to do with Andrew himself. His father explained that he regretted not being an officer himself and waiting so long to go to college. His father said he was really pleased with the progress Andrew had made and wished that he had talked with a career counselor when he

was making decisions at Andrew's age. This information from his father further increased Andrew's confidence with his choice.

Summative Review and Generalization

Sunita told Andrew she has positive feelings about what she thinks she and Andrew have accomplished and asked him to let her know how he gets on in the program in land surveying. Andrew said that after this positive experience with counseling, he would not hesitate to see a counselor at the other community college if the need arises. Sunita and Andrew reviewed Andrew's goals for counseling and the way he had used the CASVE cycle to make a decision. Sunita showed Andrew his CASVE-Cycle Questionnaire results and Progress Tracker. Together they reviewed all the items initially left incomplete that Andrew could now endorse. Andrew filled in the spaces in the Progress Tracker that visually demonstrated he had made substantial progress in each area of the CASVE cycle. Filling in those spaces with a new font color than what was originally used highlighted the benefits of his work in and outside the career counseling sessions that prepared him to execute this decision. They also reviewed the role of metacognitions and the use of information in problem solving and decision-making. Andrew reported feeling less anxious about his career situation going forward and confident about his next steps. Such a review is important to help Andrew generalize this experience to other career problems and decisions. At this point, Andrew and Sunita agreed to terminate the counseling sessions.

Although Andrew will continue to face various career development issues as he grows older, the gap that led him to seek individual career counseling has been resolved. The theoretical and applied courses in land surveying, as well as the part-time job for a surveying company, will provide him with the opportunity to reality-test his occupational choice. As he completes his educational program and prepares to begin the job search process, the tentative nature of his choice will be reduced. His experience with career counseling has given him a more fully developed set of functional self-schemata, occupational schemata, and problem-solving and decision-making skills that will enhance his career development in the future.

In terms of critical ingredients of career intervention (Sampson et al., 2020), the case of Andrew involved support (interaction with practitioners), client assessment (the Career Thoughts Inventory, the CASVE-Cycle Questionnaire, a card sort, and the Self-Directed Search), information (O*Net, FOCUS2, and information interviews), psychoeducation (process of decision-making shown in handouts and the CASVE-Cycle Questionnaire), writing (reframing cognitive distortions using the *CTI Workbook*, the CASVE-Cycle Questionnaire Progress Tracker, the Guide to Good Decision-Making Exercise, and a summary of self-knowledge), modeling (practitioner modeling of information-seeking behavior), dosage (multiple individual sessions with practitioner), and intervention fidelity (common staff training, supervision, and monitoring of the completed items on the ILP). Throughout the case, Andrew generated several types of data that could contribute to an evaluation of career interventions (Sampson & Lenz, 2023; Chapter 19 of this book), including: (a) his satisfaction with the services he received based on his responses to a follow-up questionnaire that included the Career State Inventory for evidence of outputs; (b) supervisor review of assessment data, the ILP, and case notes on interventions for evidence of intervention fidelity; (c) multiple administrations of the CASVE-Cycle Questionnaire for evidence of outputs (d) participation in a focus group on career services

at the institution for evidence of outputs and outcomes; and (e) follow-up data on eventual employment for evidence of outcomes.

Chapter 12 Summary

This chapter demonstrated how individual career counseling could be delivered using CIP theory. In the case study of Andrew, the counselor helped the client clarify his self-knowledge through a variety of assessments, to acquire occupational knowledge from the use of various career information resources, and to understand the career problem-solving and decision-making process. Services were delivered within the context of an interpersonal relationship that encouraged the development of insight and commitment to implementing career choices. The case showed how individual career counseling could be used to deliver career services. The case study also showed how the pyramid of information processing domains and the CASVE cycle could be used to structure the counseling process. The next chapter presents three case studies for the delivery of brief staff-assisted career services.

Getting the Most Benefit from Reading Chapter 12

To effectively learn the material in this chapter, complete one or more of the following activities:

- If you have had individual career counseling, how was your experience similar to and different from the approach used to serve Andrew?

- Given your knowledge of counseling theory and career development theory, what other strategies might be used to meet Andrew's needs?

- Visit a career center or counseling center, and without violating any confidentiality guidelines, ask a staff member to describe how individual counseling is provided to clients. How is the process similar to and different from CIP theory, especially the seven-step service delivery sequence?

- Talk with a friend or colleague about how the counseling strategies described in this chapter can be used to provide individuals with assistance in making career choices.

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CHAPTER 13
CASE STUDIES FOR BRIEF STAFF-ASSISTED SERVICES[61]

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This chapter presents case studies showing how cognitive information processing (CIP) theory (Sampson et al., 2020; Sampson et al., 2004) can be used in brief-staff assisted career advising, which is one form of service delivery in CIP theory's differentiated service delivery model. After reviewing this chapter, the reader should have a greater understanding of the application of CIP theory in brief-staff assisted career advising. The chapter includes the case of Kiara, the case of Carla, a summary and generalization, and concludes with a section on getting the most benefit from reading this chapter.

The case studies in this chapter show how a practitioner in a career center could integrate CIP theory to develop an Individual Learning Plan (ILP) to help the client become a better career problem solver and decision maker. The case studies allow us to illustrate the nature of complex career problems and the way they may be addressed within CIP theory.

The case studies presented in this book are composite descriptions of hypothetical individuals drawn from the authors' counseling experiences. Any resemblance, therefore, to specific persons is purely coincidental. Although the case studies presented in this chapter are hypothetical, the procedures and resources that are used reflect actual practice and available resources. We want to emphasize that the assessment, information, and instructional resources used in this case are *not* the only resources that can be used with a CIP theory-based approach, as the theory accommodates the use of a wide range of career resources. We have limited the resources depicted in the case studies to actual resources we use in practice in order to present the most accurate picture possible of the application of CIP theory in a real-world setting. The cases in this book have been updated from the cases presented in Sampson et al. (2004). Refer to Chapters 4 and 7 for a discussion of readiness levels and career assistance options that provide the basis for the case studies presented in this book. All identifying information for the clients and practitioners has been changed to protect confidentiality, especially since we include practitioners' last names.

The Case of Kiara

Background

Kiara is a 32-year-old senior in college who identifies as a female (she/her) of color, undocumented, and a first-generation college student. Kiara was brought to the United States from the Dominican Republic by her parents at a young age. She attended a middle and high school specializing in arts and sciences studies. Kiara enjoyed music and entertainment, so she spent her extracurricular time shadowing the sound and lighting technician for school theatre productions and worked on the weekends at a multinational electronics retail store. After graduating from high school, Kiara began working full-time at the electronics retail store and enrolled part-time as a distance education student at an online college. Kiara's parents could not provide financial support for continuing education, so she planned to obtain an online bachelor's degree in information technology while paying for courses through her job at the electronics retail store. Kiara was successful in her work at the store and was eventually promoted to the support services team to help customers with repairs and troubleshooting of computers and other technical products.

Her experience balancing work and online courses, however, was not as successful. The long and variable hours demanded by her work made it difficult to make progress toward her degree and she became frustrated.

Kiara believed in her ability to be successful in a bachelor's degree program, but without much financial assistance to enable her to attend college full-time, she stopped taking courses entirely to focus on her work and increase her leisure time with family and friends.

Over the next couple of years, Kiara continued to work full-time at the electronics retail store and felt satisfied with the work-life balance it provided. During this time, Kiara was promoted to assistant manager of the support services team and obtained an industry certification in cybersecurity sponsored by her employer. However, without a college degree or continued education, Kiara's career advancement possibilities were limited, and the routine nature of her job lacked innovation and creativity which she valued.

To increase her future employment options, Kiara continued to save part of her salary for college expenses and inquired with her supervisor about tuition scholarships for employees. Kiara learned that her employer offered tuition reimbursement, but it would require her to stay with the company for a predetermined amount of time. Kiara weighed the costs and benefits of this resource, but it would ultimately lead her back to working and attending school concurrently, which caused her dissatisfaction previously. She had been offered a promotion to manager at the electronics retail store, but Kiara felt this management career path would lead her further away from the hands-on technology development and troubleshooting tasks she enjoyed. Kiara was certain that she was no longer interested in retail store operations management.

At the age of 28, Kiara had enrolled full-time at the local community college, using her savings and student loans to pay her expenses. She was excited to be in-person on campus and enrolled in a college-transfer associate of arts program. Kiara majored in the college-university computer and information science track and graduated with a 3.8 GPA in two years. She then transferred to a state university and majored in information technology, with a minor in digital media. Kiara joined a club for other first-generation college students and women in STEM and learned about the university's on-campus recruitment and career services office during a recent club event. As a student who maintained a 3.8 GPA while attending the university, she is now ready to focus on her job search and finally advance her career. With Kiara's situation in mind, we'll describe her initial interview with a career adviser.

Initial Interview

Kiara approached the welcome desk at the career center entrance and stated that she recently learned about the services offered to students through a student organization. Her club mentor had suggested that she talk with a career adviser. Isabel Garcia, a master's degree student in career counseling, invited Kiara to check in for services and sit down for an initial conversation. She introduced herself and asked Kiara her reasons for seeking career services. Kiara stated that last week she completed her first job interview with a global information technology company. She had previously participated in a brief 30-minute telephone screening with the company's recruiter and then received an invitation for the next round interview, which was a one-hour virtual interview with a hiring manager. Before the interview, she had felt confident in her ability to get a good job because of her prior work experience and relatively high GPA in the informational technology major. After the job interview, she felt discouraged by her performance and anxious about future interviews. Kiara struggled with connecting her audio at the start of the interview, which embarrassed her since the interview was for a job that required digital technology competencies, and she had years of experience troubleshooting technology issues for other people. Kiara also described her interview responses as vague and disorganized

when she thought back to several of the questions raised by the interviewers. For example, she was asked how her values, interests, skills, and employment preferences matched the company's employment opportunities, training options, and priorities for future growth. Kiara told Isabel, "I came across as though I knew nothing about myself or the company, and someone younger and with less experience than me could do a better job. My performance was pathetic." Her negative impression of the interview was confirmed when she received a polite email thanking her for attending the interview and informing her that she would not be invited for a second interview at the company headquarters.

Preliminary Assessment

Isabel explained that Kiara's problem was a reasonably common one, especially for the first interview, and that the career center was designed to provide support and resources for this type of concern. She then asked Kiara to complete a brief demographic information form using one of the front desk tablet computers. This form provides accountability data on the nature of the individuals served by the center. Isabel also asked Kiara to complete the Career Thoughts Inventory (CTI; Sampson et al., 1996a) to help Isabel more completely understand the nature of Kiara's career concerns. Isabel quickly reviewed the data and noted that Kiara's CTI scores were average for the CTI Total, average for Decision-Making Confusion, high for Commitment Anxiety, and low for External Conflict. Isabel used Kiara's answers on the CTI as a focal point for a 15-minute unstructured interview to assess the extent to which negative thinking was hindering Kiara's self-knowledge and options knowledge, decision-making skills, and metacognitions.

At this stage of the service delivery process, it is crucial that Isabel exhibit good communication skills, such as empathy, clarification, and appropriate self-disclosure, as well as verbally reinforce Kiara's self-disclosures and her quest for further information. Isabel must also be sensitive to any multicultural issues that might impact her work with Kiara (Lawson et al., 2023; Swanson & Fouad, 2020; Tang, 2019). Considering Kiara's comments, Isabel concluded that the CTI results appeared to be an accurate representation of the extent of her negative career thoughts. Based on the available data, Isabel stated that she believed that Kiara could benefit from the support provided by drop-in services (a brief-staff assisted service) and did not, at this time, need individual case-managed services. She also shared her opinion with Kiara that simply gaining access to self-help resources on the job search would not provide Kiara with the help that she needed. Isabel asked Kiara if she agreed with this recommendation, and Kiara replied that this seemed to be a good approach.

Define Problem and Analyze Causes

Isabel and Kiara continued to explore the nature of Kiara's problem, including the gap, ambiguous and complex cues, interacting courses of action, the uncertainty of the success of a solution, and career decisions creating new problems. (In defining the problem, all aspects of a CIP theory perspective would not necessarily be discussed with each individual receiving drop-in services. All aspects are discussed in this case study to fully explore the dimensions of a CIP theory perspective.)

Gap

Kiara's problem can be conceptualized as a gap between her current situation (i.e., difficulty in communicating her self-knowledge in relation to a specific employment opportunity working in software development) and an ideal situation (i.e., being able to clearly articulate her self-knowledge and options knowledge so she can perform well in job interviews). This conceptualization frames Kiara's problem in rational, relative terms, as opposed to Kiara's often more emotionally laden, absolute terms, such as, "I'm pathetic" or "I just don't interview well."

Ambiguous and Complex Cues

Several of Kiara's friends also began interviewing with prospective employers, with varying degrees of success. After receiving a second interview with an employer, one of her friends commented, "Interviewing isn't as hard as I thought it would be!" This external input, combined with Kiara's conflicting feelings (disappointment over her performance in comparison with her prior confidence in her abilities) contributed to her feelings of frustration and self-doubt.

Interacting Courses of Action

Kiara has been invited to return to the multinational electronics retail organization where she worked prior to going back to college. This offer reassures Kiara that she can secure employment, but she doubts that these kinds of jobs will provide the stimulating environment or the opportunities for further advancement that she desires. Finding a more challenging job and opportunities that utilizes the skills and knowledge gained from the information technology degree program, would more likely provide the job satisfaction she seeks, but the path she should take to reach this goal is uncertain.

Uncertainty of the Success of a Solution

Even if Kiara can improve her ability to communicate effectively in an interview setting, there is still no guarantee that she will receive a second employment interview. This uncertainty contributes to her anxiety.

Career Decisions Creating New Problems

If Kiara is successful in obtaining employment that aligns with her occupational preferences, she will then need to manage new career problems related to job negotiation, such as relocation, the start date of her new employment opportunity, and remote work options she would like in a new job. As Kiara navigates these other career decisions, she will also need to complete her final courses to successfully graduate. With so many simultaneous decisions to be made, Kiara is overwhelmed by prioritizing the next steps to achieve her goals.

After asking Kiara to state her perceptions of the causes of her problem, Isabel supplemented and reframed Kiara's statement to be congruent with a CIP theory framework. Kiara lacks confidence in relating what she knows about herself (self-knowledge) with what she knows about her employment options (in this case, a job with a specific employer) as part of an overall decision-making strategy. Kiara's anxiety related to this situation is made worse by some negative self-talk (metacognitions).

Formulate Goals

Working together, Kiara and Isabel arrived at the following goals for Kiara's drop-in services:

1. Clarify Kiara's self-knowledge and options knowledge to verify her choice of software development and to help her to more effectively use what she knows about herself and her options in a job interview.

2. Identify, challenge, and alter any negative career thoughts that increase Kiara's anxiety, which in turn can interfere with her job interview performance.

3. Expand Kiara's knowledge of successful job search strategies.

4. Enhance Kiara's job interview skills.

The use of such terms as *clarify*, *expand*, and *enhance* is important from a CIP theory-based perspective. These terms imply that the individual already possesses some valid information and that the process of service delivery will build on this content. Such an approach encourages the development of positive self-talk. Goal statements with terms such as *provide* tend to imply a deficiency and do not facilitate positive self-talk.

Develop Individual Learning Plan

Isabel explained how they would use an Individual Learning Plan (ILP) to manage the delivery of services. Kiara's completed ILP is shown in Figure 13.1. (Note: Some of the activities on the ILP were added after the initial visit.)

The ILP is essentially a contract between the career center and the client who receives services. The use of a contract in providing self-directed career decision-making services has several advantages. These advantages include (a) reduced client-counselor misunderstandings resulting from poor communication, (b) improved client understanding of expectations and of the requirements of service delivery, (c) and increased accountability (Montgomery, 1984). From a cognitive information processing theory perspective, the ILP provides the client with a strategy for relating specific career resources to goals (decision-making skills domain), as well as a means for monitoring the progress the individual is making toward achieving agreed-upon goals (executive processing domain). Because self-directed career decision-making may involve many activities, the use of the ILP helps individuals manage more effectively the career problem-solving and decision-making process (Sampson et al., 2020). In CIP theory terms, the ILP serves as a mechanism to enable an individual to "download" material that would normally be carried in working memory, thereby helping the individual to feel less overwhelmed by the size of the task. Some of the learning activities included in the ILP are in the form of resource guides. Each resource guide contains a set of learning objectives and alternative learning activities, such as reading web-based media, viewing multimedia content, using information technology applications, discussions with practitioners, and completing homework assignments. Sample resource guides are included in Chapter 7 of this book.

Figure 13.1

Kiara's Individual Learning Plan (ILP)

Individual Learning Plan

Goal(s)
1. Clarify self-knowledge and occupational knowledge
2. Restructure negative career thoughts
3. Expand job search strategies and enhance job interview skills

Activity	Purpose/Outcome	Time Needed	Goal #	Priority
Complete FOCUS2 self-assessments and review occupational information	Clarify values, work interests, skills, and gather information about occupations to integrate self and occupational knowledge in decision-making situations confidently	2 hours	1	1a
Review items agree and strongly agree on the CTI and reframes in the CTI Workbook on pp. 15-23	Identify, challenge, and alter negative career thoughts that impact job interview performance	60 minutes	2	2
Complete an e-learning course on job search strategies	Clarify, organize, and increase knowledge of effective job search strategies	60 minutes	3	3
Drop-in for a resume critique	Receive feedback to improve resume to assist with the job search	30 minutes	3	6
Participate in an interview skills workshop with interview videos and simulation	Expand knowledge of interview skills with an opportunity to improve and practice	90 minutes	4	4
Utilize resources to read about occupations	Review books and online databases to explore further occupational information related to top job choices	90 minutes	1	1b
Conduct an informational interview	Obtain occupational information	60-90 minutes	1	1c

This plan can be modified by either party based upon new information learned in the activities of the action plan. The purpose of the plan is to work toward a mutually agreed upon career goal. Activities may be added or subtracted as needed.

Kiara
_____
Student/Client   Date

Isabel
_____
Career Advisor   Date

Isabel began by writing down the four goals that she and Kiara had just formulated verbally. After putting the goals in writing, Isabel asked if Kiara agreed with the goals and if the goals should be reformulated in any way. Kiara said she felt satisfied that the attainment of these goals would help solve her career problem. Kiara's active participation in this process of clarifying her goals helped increase her motivation for achieving them; it also affirmed that her contributions were valuable, thus reinforcing positive self-talk about her problem-solving and decision-making skills.

For the first goal, clarifying self-knowledge and options knowledge for verifying her career choice and preparing for future employment interviews, Isabel recommended that Kiara use the computer-assisted career and educational planning system FOCUS2 (Career Dimensions, 2023). Isabel recommended that Kiara use the self-assessment and career exploration components of the system. The purpose of this activity is to help Kiara confirm her choice of software developer as an occupation by helping her understand how this occupation is potentially congruent with her values, interests, skills, and employment preferences. She also can compare the appropriateness of software developer with that of other possible occupations. Such comparisons can confirm her choice, or they may open up the possibility of other occupations that may be more appropriate. Because FOCUS2 provides the same type of information for each occupation, the similarities and differences between occupations can be explored. This knowledge then serves as a basis for understanding the similarities and differences between specific job opportunities, which can, in turn, be communicated in an initial job interview with a potential employer. By verifying her choice of software developer, Kiara can also increase her confidence in her choice as she searches for a job. This increased confidence results from more-positive self-statements, such as "I have thought about this carefully, and I believe this is the best choice for me right now."

For the second goal, identifying, challenging, and altering any negative career thoughts, Isabel recommended that Kiara complete the *CTI Workbook* (Sampson, et al., 1996b). Isabel suggested that Kiara complete Sections 1, 2, and 3 of the *CTI Workbook* in sequential order, so that Kiara might gain an understanding of the nature of her negative thoughts, clarify how negative career thoughts make it more difficult to make career choices, and to help her restructure her negative career thoughts using the workbook exercise.

For the third goal, expanding Kiara's knowledge of successful job search strategies, Isabel recommended that Kiara complete an e-learning course on job search strategies. The career center subscribes to a database of online career management and job search training modules that serve as self-directed learning activities, which Kiara can utilize.

This resource can help Kiara clarify, organize, and extend her knowledge of effective job search strategies. Isabel then suggested that Kiara have her resume reviewed by a career adviser. This will help to ensure that Kiara's resume fully and accurately reflects her background and accomplishments. This review can also contribute to positive self-talk regarding the thoroughness of her preparation for the job search process and future interviews.

For the fourth goal, enhancing job interview skills, Isabel recommended that Kiara attend a workshop on effective interview skills and participate in a practice interview with a career center staff member. The practice interview will give Kiara an opportunity to receive feedback on her interview behavior. Isabel also made Kiara aware of additional interviewing resources she could use to continue her self-directed learning.

Isabel then summarized Kiara's presenting concern and the basic elements of the ILP, noting the progress that Kiara had made that day. Isabel demonstrated to Kiara how to create a FOCUS2 account and navigate the system components, such as the self-assessments and occupational exploration tool. Isabel explained to Kiara that she could utilize the career center library computer lab to work on her FOCUS2 activity and encouraged her to stop by again to review her self-assessment and occupational exploration results.

Isabel explained that she might be assisting another visitor, but there were other career advisors available to help Kiara with her ILP activities and goals. Isabel reminded Kiara to bring her ILP each time she visits the career center for services so she can continue self-directed progress through brief-staff assistance with a career adviser.

Finally, Isabel modeled to Kiara how to sign-up for an appointment with a career center staff member for a practice interview session and how to register for the interviewing workshop (allowing adequate time for Kiara to complete goals one, two, and three first).

Kiara's initial contact with a career adviser lasted 45 minutes, including the 10 minutes it took for Kiara to complete the Career Thoughts Inventory assessment on her own while Isabel worked with another student on a brief resume critique.

Execute Individual Learning Plan

Two days later, Kiara arrived at the career center to complete her first ILP activity, clarifying her self-knowledge through the computer-assisted guidance system, FOCUS2. She signed in at the main desk (this sign-in procedure provides accountability data for the career center) and met Susan Franklin, a professional staff member and a national certified career counselor with a master's degree in counseling. Susan asked her to briefly describe her reasons for seeking services and to review her ILP. This procedure allowed Susan to assess the clarity with which Kiara understood both her situation and the service-delivery approach outlined in the ILP. From Kiara's description of the situation, Susan judged that it was appropriate to proceed with her ILP's first learning activity. Susan then oriented Kiara to the use of FOCUS2.

Susan reviewed with Kiara the self-assessment variables that she would be examining on FOCUS2, made sure that Kiara understood how the system would link her personal characteristics with various occupations, and reminded her to review the results with a career advisor. Susan then walked with Kiara to the career center's computer lab and demonstrated how to log into FOCUS2 with the university's access code and unique website. She provided Kiara with a brief orientation to FOCUS2 using a User Guide/Workbook located on the career center's website, which Kiara could utilize later, as needed. Susan remained in the room while Kiara progressed through the first few displays to ensure Kiara understood how the system functioned. Before leaving the computer lab to help another student, Susan asked Kiara to seek assistance from her or another career adviser if she had any questions while working independently.

Goal 1: Clarifying Self-Knowledge and Options Knowledge

Kiara used FOCUS2 to assess her values, interests, skills, and employment preferences (the Analysis phase of the CASVE cycle). She then used the system to identify occupations that were congruent with her values, interests, skills, and employment preferences (the Synthesis-Elaboration phase of the CASVE cycle). After saving her results and indicating occupational

'favorites' in the system to research further, Kiara developed the following preliminary list of potentially appropriate occupations:

- Graphic Designer

- Mobile Applications Developer

- Network Architect

- Project Manager

- Software Developer

- Systems Analyst

- Systems Security Administrator

- Web Administrator

- Web Designer

Susan and another career adviser checked with Kiara every 15 minutes to see if she had any concerns or questions. After 45 minutes in the computer lab, Kiara returned to the main desk to let Susan know she was satisfied with the amount of time spent clarifying her self-knowledge using the FOCUS2 system. Kiara explained that her next class started in 30 minutes, so she had to leave the career center, but would return the next day to follow up on her FOCUS2 results. Susan understood and suggested that Kiara review the assessment results and occupations saved in the FOCUS2 system profile before returning to the center again. As Kiara left for class, Susan motioned to a poster in the center with an image of the CASVE Cycle, pointing specifically to the Analysis and Synthesis phases, and noted to Kiara that she was on her way to clarifying her self-knowledge, options knowledge, and expanding upon her list of job options.

A few hours later, Kiara returned to the career center and was greeted by Dewayne Williams, a career adviser who was enrolled in a master's degree program in school psychology. Kiara explained that she was in the process of completing goal one on her ILP and would like assistance reviewing the FOCUS2 results. In their review, Dewayne paid particular attention both to Kiara's efforts to clarify her knowledge and to her understanding of the career problem-solving and decision-making process. Kiara was relieved that occupations related to software developer appeared several times on various lists generated by the system, thus reinforcing positive self-talk about her capacities as a problem solver and decision maker. Dewayne then suggested that Kiara return to FOCUS2 to learn more about the occupations she was considering. He then reviewed with Kiara the components within the FOCUS2 system for obtaining information about the career options she was considering. Using a strategy recommended by Dewayne, Kiara briefly reviewed general information on all of the occupations she was considering, eliminating those occupations that were inappropriate. Kiara then used FOCUS2 and the *Occupational Outlook Handbook*, to explore occupational titles: web administrator, network architect, software developer, and systems analyst more in-depth. After she completed her research in the computer lab, which lasted 55 minutes, she discussed her reactions with Dewayne. Kiara described two categories for her occupational options: software development and information support. By using FOCUS2 and then reflecting on what she had learned, Kiara was able to further develop her schema for options knowledge.

Dewayne then helped Kiara to consider the options in terms of costs and benefits (the Valuing phase of the CASVE cycle). Kiara stated that although she finds the interpersonal activities in information support and services appealing, she believes software development would provide a greater diversity of benefits (contact with systems to solve problems or innovate solutions and early opportunity for career advancement) while having well-defined but manageable costs (more remote work opportunities). Software development also has the advantage of allowing her to build more easily on her past experience and improving her starting-salary potential. Dewayne suggested that Kiara might want to add an activity to her ILP of reviewing an e-book accessible through the career center's website that provides a comprehensive description of programming and software development careers. Kiara agreed and was happy to learn that the career center had books she could review, some of which were available electronically.

The next day, Kiara returned to the career center to gain additional information. After she signed in at the front desk, Kiara asked Karen Wong, a career adviser who was enrolled in a master's degree program in student affairs in higher education, for assistance in locating additional career resources on programming and software development. After clarifying that Kiara was in the process of completing an ILP and needed minimal assistance, Karen helped Kiara utilize the Career Key system (Epstein et al., 2000; Epstein & Lenz, 2008), a computer-based index of resources contained in the career center library. Karen then helped Kiara locate a specific book of interest and reminded her that she was available to answer questions.

Sitting down at a table in the career center library, Kiara read relevant portions of the book for 30 minutes. Then, closing the book, she thought about what she had read, comparing the information both with what she had learned from FOCUS2 and from her own work experience (cycling back to the Analysis phase of the CASVE cycle). Sensing that Kiara might need assistance, Rodrigo Silva, the career center librarian, who has a master's degree in library and information science, asked Kiara if he could be of any assistance. Kiara replied that she was trying to learn more about programming and software development and had just finished reviewing a book on the topic. Rodrigo asked if she would be interested in talking with someone in the field of programming and software development. When Kiara said, "Yes," Rodrigo invited her to sit down with him at an available computer where they could access the career center website together. Rodrigo used an online database of professionals to locate Ingrid Swensen, who was identified on the website as the manager of an online software development company specializing in mobile applications. Kiara expressed interest in an interview with Ingrid, and Rodrigo provided her with a handout with guidelines for scheduling and conducting an information interview. Rodrigo also updated her ILP before she left the center.

In scheduling the information interview over email, Kiara shared briefly about her interest in software development and expressed a desire to learn more from someone working directly in a field related to her career interests. The next week, Kiara arrived at the information interview with a short list of questions for Ingrid. After Kiara and Ingrid introduced themselves, Ingrid provided a brief overview of the company and her specific job responsibilities, and gave Kiara a tour of the office so she could see the work environment. Kiara then asked questions based on the new insights she had gained from clarifying her self-knowledge and options knowledge. As Kiara was leaving, Ingrid stated that although her company was not currently hiring for positions that matched Kiara's job preferences, she was impressed with Kiara and asked her to follow up by emailing a resume that she could keep on file. Kiara said that she

would be happy to and thanked Ingrid for her time. At this point, Kiara's self-talk was enhanced, both in terms of her self-worth ("I do have something of value to offer in program and software development") and her confidence in decision-making ("my initial decision about software development was good after all").

The next day, Kiara followed up on her ILP by visiting the career center again. She was excited to share her experience with Ingrid and thanked Rodrigo for his assistance in preparing for the information interview. When Kiara arrived at the center, Rodrigo was helping a student and it looked as though Rodrigo would be occupied for a while. Since Kiara was familiar with the service delivery at the center and brief staff-assisted guidance, she felt confident that any career adviser she was paired with would be able to review her ILP and next learning activities. Kiara signed in at the main desk and met Anthony Walker, a professional staff member and liaison to first-generation college students. As they sat down at a table, Anthony asked to review Kiara's progress on the goals in her ILP. As Kiara described her experiences, Anthony asked questions to assess how Kiara had progressed in terms of self- and options-knowledge, decision-making skills, and metacognitions. Anthony asked Kiara to summarize her thoughts about her occupational choice. Kiara replied, "As I see things now, my two best options are a software developer and network architect. If I had to choose right now, I would choose software developer. The initial position that I want to apply for would be a software developer and I believe that with my work experience, I could move right into a mentorship program, available at many global software development companies. I like the idea of the higher pay and the respect for my past work experience, but a structured mentorship program will help me make a better start with the company. After all the time and effort that I've put into this degree, I really want to do this right. A few of the largest programming and software development companies offer mentorship programs, especially for women in technology, that rotate you through all of the major operations areas as well as help you network with new and experienced employees. So, I think that software developer would be a better choice now than a network architect. After I rotate through all of the areas, I may still be able to move into network architect or a systems security position, or try for a different position that I like better."

Anthony asked Kiara what she thought about her progress on this first goal listed on her ILP. Kiara said that she was confident in her tentative choice and was ready to move on to her next goal.

Goal 2: Restructuring Negative Career Thoughts

Anthony briefly reviewed how negative self-talk could influence one's job search behavior. Kiara stated that she was feeling pretty good about herself now, so why not skip this goal and go on to the next goal. Anthony said, "You could go on to clarifying your knowledge of job search strategies at this point, but I believe it would still be worth the time to explore your self-talk and job search behavior. Even though I am aware of how my thoughts influence my feelings and behavior, I still sometimes let things get out of hand. Recently I was studying for an exam in statistics required for my doctoral program. I was able to answer all of the problems in the book except one that dealt with a particularly abstract concept that was just barely covered in class. I was really anxious about the exam and was not studying effectively at all. Because anxiety is one of my signals that something is wrong, I gave myself permission for a time out, to figure out what was happening. Well, of course, I was doing my usual perfection game, thinking that if I can't work out every problem, I'm not going to pass the exam. When I thought about the

situation more rationally, I realized that I could miss several problems and still do well enough on the exam to keep my current grade point average. I went back to my studying, concentrating a lot better. As it turned out, I did get the answer wrong on the question related to the abstract concept, but I did well on the rest of the exam. I don't have to be perfect to succeed." Anthony's modeling via self-disclosure was aimed at encouraging Kiara's exploratory behavior as well as providing a further example of how cognitions influence feeling and behavior.

Anthony continued, "I suspect that you may have some similar self-talk that limited your success with your first job interview. Being more certain of your occupational choice doesn't necessarily eliminate negative self-talk." Kiara agreed that it probably would be useful for her to examine this issue. Anthony reviewed the three sections of the *CTI Workbook* that were assigned on Kiara's ILP and encouraged her to begin working on this activity. Anthony informed Kiara that he would be out of the center for the remainder of the week but that other staff would be available to help her complete her ILP. Kiara thanked him and said that she looked forward to checking in with another staff member the following week.

That evening, Kiara completed the first two sections of the *CTI Workbook*, learning about the impact of negative career thoughts on career choice and the nature of her scores. She then began the third section, which is designed to help users challenge and alter negative career thoughts. Using CTI items as a focal point, she learned the process of cognitive restructuring. After writing out the original negative career thought, she read a brief reframing stimulus statement that challenged her thinking. With this input, she then altered (revised) her original negative thought to be more positive. She noticed a recurring theme of absolute thinking and perfectionism that made her more anxious and less effective as a decision maker. Even though they were not assigned, she read Sections 4 and 5 of the workbook, reviewing the process of career problem solving and decision-making, and learning how to make good use of support from other people. Her positive self-talk and decision-making confidence was reinforced as she recognized how much she had learned about problem solving and decision-making.

Goal 3: Expanding Knowledge of Job Search Strategies

Kiara returned to the career center a few days later to complete the next goal on her ILP. Rodrigo Silva, the career center librarian, asked if he could provide any assistance. Kiara responded that she did need assistance, and Rodrigo reviewed her progress in completing her ILP. After commenting positively on her progress, Rodrigo helped her locate the online database of e-learning courses and get registered for an appropriate job search training, as indicated on her ILP. Kiara decided she would view the job search e-learning course later that evening and use her time at the career center for a resume review, so she could work on revising the work experience section.

Kiara was able to talk with Susan Franklin, who reviewed Kiara's ILP progress to see that she had previously clarified self and occupational knowledge, challenged and altered negative career thinking, and was expanding knowledge of job search strategies. The regular review of a client's ILP by various staff members helps to ensure continuity of service delivery and reinforces the belief that the client's behavior (for example, use of resources and thoughtful reflection) is the primary focus (internal locus of control), as opposed to the client seeking to be "fixed" by a staff member (external locus of control).

Susan critiqued Kiara's resume, noting that it was comprehensive and well written. She suggested that Kiara incorporate accomplishments and specific competencies within the work experience section.

In addition to the existing activities identified on the ILP for the third goal, Susan suggested that Kiara complete a transferable skills activity sheet and view two informational interviews of industry professionals, using the Candid Career video platform, which features thousands of employers and professionals who provide valuable insight and first-hand knowledge about industry skills and experiences. These activities could facilitate Kiara's preparation for interviewing by enhancing her general knowledge of her own transferable skills and how they can be applied with the two companies, as both of these companies recruit on campus.

Noting that Kiara was scheduled to attend a workshop on effective interviewing skills the following Monday, Susan suggested that Kiara also view the Candid Career videos on effective interview skills, including similarities and differences between virtual and in-person interviews.

Goal 4: Enhancing Job Interview Skills

After completing the e-learning course on job search strategies, Kiara attended the scheduled workshop on effective interviewing skills. Shreenika Kumar, a technical recruiter with a top software development company, led the workshop. The workshop began with Shreenika and the 12 participants introducing themselves. The introduction included identification of prior interviewing exposure, giving the recruiter an indication of the nature of the participants' actual experience. The process continued with a brief discussion of workshop objectives:

1. Describe how job interviewing skills relate to the total job search process.

2. Describe a general strategy for preparing for an effective job interview by clarifying and/or obtaining self-knowledge and occupational and employer knowledge.

3. Recognize the typical structure of a job interview and common interview types (e.g., screening interview, first interview, on-site interview).

4. Respond directly and assertively to typical interview questions.

5. Identify common barriers to effective interviewing.

After reviewing the workshop objectives, Shreenika presented information and answered questions related to the first three objectives, and then modeled answering several typical interview questions. The participants selected partners, and, using a role-playing technique, Shreenika had each pair ask and answer prepared questions, and then provided feedback to the participants on their interview performance. In the final part of the workshop, two volunteers role-played interviews, which were recorded. Kiara was quick to volunteer for this option. Her interview consisted of Shreenika playing the part of the potential employer and Kiara responding to questions. Kiara was able to answer all the questions confidently, demonstrating a capacity to relate her values, interests, and skills to the employment opportunities, training options, and priorities for the future growth of a hypothetical software development company. The workshop participants watched the video recording and critiqued the live interview role-play, generally approving her performance. One student commented that Kiara could have been more animated when discussing issues that were personally important. Shreenika replayed the video recording, asking the participants to pay attention to the participant's nonverbal communication. Kiara

noticed that her laid-back posture was not congruent with her actual interest in the interview. The process was repeated for the second volunteer interviewee.

Summative Review and Generalization

Kiara arrived at the career center to discuss her progress and review her ILP. Isabel happened to be working that day and sat down with Kiara to review her progress. Kiara commented that although she was still somewhat anxious about finding a good position with the right company, she was much more confident of both her occupational choice and her job search skills. She said, "programming and software development jobs really appeal to me. I can build on my past experience, which I like because it means that all of those years in the electronics store were helping me to get a better job. I believe this type of work can provide me with the challenge, innovation, career advancement, and job satisfaction I'm looking for. I also think I can effectively and confidently communicate my career goals to an interviewer. Having the terms to describe how I view the work environment and myself helps a lot! I also think about what I've been thorough in making my decision–sort of like a software developer who strategically uses specific information to create the best solution!"

Isabel asked about Kiara's experience in completing the *CTI Workbook*. "I can see how my negative, absolute way of thinking and perfectionism led me to be so anxious that I didn't do very well in my job interview. I guess I've been doubting myself and my transferable skills for a long time. It's not easy to change the way you think–sort of like changing a bad habit! At least now I am beginning to catch myself before things get way out of hand." Kiara then said, "My resume is better, and I know a lot more about interviewing skills, job search strategies, and general professional communication."

Kiara and Isabel agreed that the goals they had established on the ILP had been met. Isabel suggested that Kiara keep all her materials and printouts for future reference. She explained how the career center could help her process future job interviews. Isabel asked Kiara to complete a Career Center follow-up questionnaire, which allows individuals to provide feedback on the quality of services provided and make suggestions for improvements. Kiara thanked Isabel and said that she would let Isabel know about her next job interview experience.

In terms of critical ingredients of career interventions (Sampson et al., 2020), the case of Kiara involved support (interaction with practitioners), client assessment (the Career Thoughts Inventory and FOCUS2), information (FOCUS2 and information interviews), psychoeducation (process of decision-making shown in handouts and a poster), writing (reframing cognitive distortions using the *CTI Workbook* and resume writing), modeling (practitioner modeling of information-seeking behavior), dosage (initial interview and assessment of readiness for decision-making), and intervention fidelity (common staff training and supervision). Throughout the case, Kiara generated several types of data that could contribute to an evaluation of career interventions (Sampson & Lenz, 2023; Chapter 19 of this book). These data collected from Kiara, included: (a) her satisfaction with the services she received based on her responses to a follow-up questionnaire that included the Career State Inventory for evidence of outputs; (b) participation in a focus group on career services at the institution for evidence of outputs and outcomes; (c) participant observation data that provided evidence that she was able to locate and use career assessments and information; and (d) follow-up data on eventual employment for evidence of outcomes.

The Case of Carla

Background

Carla Phillips is a 21-year-old white female who is in her junior year in college and is majoring in social studies education at the secondary level. She currently has a B- average in college. Her work experience has been limited to service jobs in two fast-food restaurants.

Initial Interview

Carla approached the desk at the career center entrance, stated that she is a social studies education major, and asked for information on summer job opportunities related to education or government. Isabel Garcia, a career adviser, invited Carla to sit down. Isabel introduced herself and asked Carla to be more specific about the information she needs. Carla stated that by the end of this academic year, she will have developed teaching skills that she would like to use in a summer job instead of returning to her old job at the fast-food restaurant. Carla was making a concrete request for information, and there was no evidence of a significant problem, so Isabel gave her a resource guide on gaining work experience, an information handout on job search strategies, and used one of the career center library computers to model how to access several online employment directories.

Isabel moved about the career center library, answering questions, and keeping track of the activities of several people that she was assisting. In observing Carla, Isabel thought she was making progress learning about information, but then she noticed Carla seemed to be clicking quickly from one site to the next and these efforts appeared to be cursory instead of careful use of the sites. After Carla moved rapidly between websites, she returned to reading a printed information handout, and then stared at her phone. Her reading seemed random and disorganized. Sensing that something might be wrong, Isabel sat down at the table and asked if Carla was getting the information she needed. Carla stated that the information was very useful. Noting a discrepancy between Carla's words and her apparent anxiety, Isabel stated that the large amount of information that the career center has available can be overwhelming at times. Carla emphatically agreed and stated that she was uncertain how to use all the information. Isabel suggested that it would be useful to learn a little more about Carla's needs so she could help her locate the most useful information.

Preliminary Assessment

Isabel asked Carla to complete the Career Thoughts Inventory (Sampson et al., 1996a) to identify her readiness for career decision-making. Isabel quickly scored and reviewed the data, noting Carla's CTI scores were average for the CTI Total, one standard deviation above average for Decision-Making Confusion, average for Commitment Anxiety, and average for External Conflict (but nearly above average). To assess Carla's general approach to decision-making, Isabel asked her to describe a recent decision she had made. Carla said, "My roommate told me last weekend that the tires on my car were almost bald and that I needed to buy new tires. I went to a tire store and looked at all kinds of tires. The salesperson was nice and told me about all the different tires available. But it was just too confusing! There was no way that I could decide. My father always used to help me with things like that. I just told the salesperson how much I had to spend and asked her to just pick the best tires for the money. I was so glad to get out of there. If I

had chosen the tires, they would have been the wrong type, or they would have gone flat or something!"

Isabel asked Carla to describe her current occupational choice of secondary social studies teacher. Carla stated, "Teaching is a really good field. It's important work, and kids really look up to their teachers–at least I really did when I was in school." Isabel asked if anything else influenced her decision to become a teacher. Carla said, "My mom and dad were really happy when I decided to become a teacher. They are really counting on me."

Isabel then explored the extent of Carla's occupational knowledge. When asked to describe the most appealing daily work tasks associated with teaching, Carla was unable to provide a concrete answer. Isabel said, "Carla, I sense that although you find teaching appealing, you have some major doubts that being a secondary social studies teacher is your best choice."

Carla continued shifting her weight back and forth in her chair while speaking. She said, "I'm really scared about all of this. I really don't know what I want to do about anything! I thought that by getting a summer job in teaching, I'd find out if I've made the right choice. But now I'm not sure that would help me after all. What do you think I should do?"

Isabel formed a working hypothesis that Carla was indecisive and that her negative career thoughts, considerable anxiety, and dependent decision-making style were potentially significant barriers to effective career problem solving and decision-making. Carla was clearly not likely to benefit from self-directed career decision-making or a brief staff-assisted service, and a referral was warranted. Isabel stated, "Your confusion and anxiety about making decisions suggest to me that there may be some issues for you that have become barriers to making a career choice. In order to have some time set aside to focus on these issues, I recommend that you schedule an appointment with one of our counselors. Right now, I don't believe that looking at this information on summer job opportunities will be very helpful. Later on, I would be happy to help you locate and use any information that we have available. Does this sound like a good approach to you?"

Carla agreed that the opportunity to talk with a counselor would be a good idea. Isabel helped Carla make an appointment for counseling and provided a brief orientation to the counseling process. Carla then completed a counseling intake form that included an informed consent. Carla left the career center with a commitment to return for individual career counseling to help her address her career problems.

In terms of critical ingredients of career intervention (Sampson et al., 2020), the case of Carla involved support (interaction with practitioners), client assessment (the Career Thoughts Inventory), modeling (practitioner modeling of information-seeking behavior), dosage (initial interview and assessment of readiness for decision-making), and intervention fidelity (common staff training and supervision). Throughout the case, Carla generated several types of data that could contribute to an evaluation of career interventions (Sampson & Lenz, 2023; Chapter 19 of this book), including: (a) her satisfaction with the services she received based on her responses to a follow-up questionnaire after the completion of individual counseling for evidence of outputs; and (b) supervisor review of assessment data and case notes on interventions for evidence of intervention fidelity; and (c) follow-up data on eventual employment for evidence of outcomes.

Chapter 13 Summary

This chapter summarizes two different case studies of brief staff-assisted career advising with the case of Kiara who benefited from brief staff-assisted services. Then, the case of Carla was shared as someone who began with brief staff-assisted services, but needed more individualized services and was referred to individual career counseling based upon her level of career readiness. For this CIP theory-based model to effectively benefit clients, it is essential that the readiness of the client is considered. There is additional information about career decision-making readiness assessment in Chapter 8 of this book.

Getting the Most Benefit from Reading Chapter 13

To effectively learn the material in this chapter, complete one or more of the following activities:

- If you have experienced a brief staff-assisted career decision-making intervention, how was your experience similar to and different from the approach implemented to serve Kiara and/or Carla?

- Given your knowledge of counseling theory and career development theory, what other strategies might be used to meet the needs of Kiara and Carla?

- Visit a career center or counseling center, and without violating any confidentiality guidelines, ask a staff member to describe how brief career interventions and group career counseling are provided to clients. How is the process similar to and different from the CIP theory-based approach, especially the seven-step service delivery sequence?

- Talk with a friend or colleague about how the brief interventions described in this chapter can be used to provide individuals with assistance in making career choices.

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CHAPTER 14
CASE STUDIES FOR SELF-HELP CAREER RESOURCES AND SERVICES

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This chapter presents case studies showing how CIP theory can be used in a self-help service-delivery mode.[62] After reviewing this chapter, the reader should understand how CIP and/or RIASEC theories could be used in delivering self-help career resources and services. The chapter begins with a case study of Catherine followed by a case study of Arnie. The chapter concludes with a summary and a section on getting the most benefit from reading this chapter.

Self-help services are indicated when an individual makes a direct request for information with no sign of a problem in terms of negative thinking or external conflict (Sampson et al., 2020). This indicates a readiness to engage in career decision-making. Self-help services include the use of resources in a physical setting, such as a career center or a virtual setting (e.g., websites) where it is possible to ask questions of a practitioner or obtain support when needed.

A recurring theme in this chapter is the notion of readiness for career decision-making first discussed in Chapter 4 of this book with elaboration in later chapters. Readiness is especially important with self-help interventions as explained in Chapter 7. Each of the cases described in this chapter uses a slightly different approach to readiness assessment. As with the previous case studies in Chapters 12 and 13, these case studies allow us to illustrate the nature of career problems and the way in which theory can be used to address these problems.

The case studies presented in this book are composite descriptions of hypothetical individuals drawn from the authors' counseling experiences. Any resemblance, therefore, to specific persons is purely coincidental. Although the case studies presented in this chapter are hypothetical, the procedures and resources that are used reflect actual practice and available resources. We want to emphasize that the assessment, information, and instructional resources used in these cases are *not* the only resources that can be used with a CIP theory-based approach, as the theory accommodates the use of a wide range of career resources. We have limited the resources depicted in these case studies to actual resources we use in practice in order to present the most accurate picture possible of the application of CIP theory in a real-world setting. The cases in this book have been updated from the cases presented in Sampson et al. (2004). Refer to Chapters 4 and 7 for a discussion of readiness levels and career assistance options that provide the basis for the case studies presented in this book. All identifying information for the clients and practitioners has been changed to protect confidentiality, especially since we include the last names of practitioners.

The Case of Catherine

Background

Catherine Yang is a 19-year-old Asian American female completing the first semester of her sophomore year in college. She is becoming increasingly aware of the need to finalize her selection of a major field of study (the Communication phase of the CASVE cycle; see Chapter 2 of this book) and has discussed this with her roommate. Her roommate suggested that she go to the campus career center that provides assistance to students who are choosing or changing majors. (A detailed description of this career center is provided in Chapters 16 and 17 of this book.) Catherine remembered that the services provided by the career center were described

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[62] Content in this Chapter was used or adapted from Sampson et al., (2004; 2020), Kronholz (2015), and Leierer et al. (2022). Used or adapted with permission.

during freshman orientation and that specific details were available on the center's website. Using her tablet in her residence hall, she learned that assessment and information resources were available, as well as career counseling, to help students choose majors. Reviewing this information helped Catherine visualize how she might decide if nursing was an appropriate choice and increased her motivation to seek assistance at the career center.

Catherine also recently received a notice of registration times for spring semester classes, which caused her to think about the need for settling on her major (external event). She also felt a mixture of excitement and anxiousness about the possibility of majoring in nursing to "make a contribution in the world" while also helping her to be "economically self-sufficient" (internal cue of emotions).

Initial Interview

Upon entering the career center (no appointment was necessary), Catherine was greeted by Alan Richardson, an intern completing a master's degree in career counseling. Alan asked, "What brings you here today?" Catherine responded that she wanted to look at information about employment options for nurses. Alan asked her to sign in, explaining that demographic data was being collected for accountability. Noticing that she was a sophomore with an undecided major, he asked if she would also like information on selecting a major. She said that would be helpful.

Readiness for Decision-Making

Alan assessed that self-help services would be an appropriate starting point for Catherine's use of resources and services in the career center. He based this hypothesis on the fact that Catherine had provided a concrete request for information about a specific occupation and had not indicated any issues that would compromise her independent use of resources. (Details about readiness for career decision-making are provided in Chapter 4 of this book and readiness measures are presented in Chapter 8.) He monitored her progress in using career resources while she remained in the career center.

Intervention

Alan showed her several sites on the career center's webpage that include information on employment opportunities in nursing, and he showed her the display rack of resource guides and related materials that she could use to help her select other library resources (https://career.fsu.edu/resources/quick-guides). He also pointed out the location of information handouts that she might find useful (https://career.fsu.edu/resources/career-guides). Alan also gave her a quick orientation to the career library by indicating the posted signs and by showing the location of specific resources. He also showed her Career Key (Epstein et al., 2000; Epstein & Lenz, 2008), the center's computer-based index of resources contained in the career library (https://career.fsu.edu/resources). Since she stated that she was interested in making a decision about a college major, Alan further recommended that she complete the *Guide to Good Decision-Making Exercise* and then showed her how to locate the exercise on the career center's webpage. Before moving to help the next person at the reception desk, Alan asked if Catherine had any questions (*Readiness assessment*). After she responded, "No," he suggested that she speak with him or another staff member if she needed assistance with any of the resources.

First Independent Study Period

Catherine sat at one of the tables in the library and began reading the information handout that Alan had provided previously (the Analysis-options knowledge phase of the CASVE cycle). She took notes on her tablet about the relevant portions, thinking to herself that nurses were involved in more diverse work settings than she had imagined. After about 15 minutes, Alan stopped by her table and asked, "Are you finding the information you need?" (*Readiness assessment*.) Catherine responded, "Yes, the information is great," and Alan moved on to another person in the library to monitor their progress in using resources.

Catherine stopped reading and reflected on what she had learned. Nursing, particularly working in a hospital that provided a lot of variety and excitement appealed to her, but she was still uncomfortable with proceeding. Catherine felt anxious about making a premature choice, remembering that she had made several mistakes in the past by making impulsive decisions without fully understanding what she was choosing. Catherine remained confident that she could make a good choice if she took the time to carefully think about her options.

Remembering the information handouts that Alan had provided earlier, Catherine selected *Choosing a Major or Occupation* and began reading. The objectives listed in this career resource guide (linking personal factors and potential majors, enhancing knowledge about specific majors, and enhancing decision-making skills) fit her needs to make an informed, rather than an impulsive choice.

Catherine read the information handout on *Choosing a Major or Occupation*, noting that she had completed several of the recommended steps. She felt better realizing that she had intuitively known some of the necessary steps in the process of selecting a major (Analysis-decision-making skills phase of the CASVE cycle). She also felt better knowing some of the remaining steps that needed to be completed. With renewed energy and confidence, she began to make a list of things that needed to be accomplished. As she was completing her list, Alan again stopped briefly and asked her if she was getting the information she needed. (*Readiness assessment*.) Catherine responded that she was and that she wanted to learn more about several options she had considered in the past: nursing, speech pathology, and clinical psychology. Noting that it was time to leave for class, Catherine decided to return to the career center later to begin her exploration of the three options she was considering.

Second Independent Study Period

The next afternoon, Catherine returned to the career center library and began exploring nursing, speech pathology, and clinical psychology. After signing in at the reception desk, Catherine introduced herself to Delores Sanchez who was the career adviser on duty. Catherine explained that she wanted to get information about several occupations. Delores asked if she needed any help in locating the information (*Readiness assessment*), and Catherine said, "No." Delores said that she would be on duty for the next two hours and to talk with her if Catherine had any questions or needed any assistance.

Catherine returned to the resource guide Alan Richardson had provided in the initial meeting to develop a strategy for accessing the information she needed. The Career Key library indexing system was mentioned in the resource guide, and Catherine remembered that Alan had briefly explained how she could use the index to select and locate resources in the library. As she approached the computer where Career Key was available, the career center librarian, Steve

Goldberg, asked if he could be of any assistance. Catherine responded that she was looking for specific information on nursing and some other related occupations. Steve showed Catherine the menu options for locating occupation-specific information and reminded her to check with him if she had any further questions. Catherine then generated a computer printout identifying information sources for each of the three occupations that interested her.

Catherine reviewed the information sources listed on Career Key for each occupation and noted that several books were available in the library. Looking around the room, she noticed signs indicating where relevant books were located. After reviewing selected resources, she was then able to locate the information she needed and read descriptions for each of the three occupations, confirming what was important to her in an occupation (the Analysis-self-knowledge phase of the CASVE cycle). She added to her knowledge base about the link between fields of study and occupations by accessing websites listed on the career center's *Match Major Sheets*. Based on what she had learned, she was able to eliminate clinical psychology, one of the three options she was considering (the Synthesis-crystallization phase of the CASVE cycle).

As she finished her use of resources, Delores stopped by her table and asked if she was finding the information she needed (*Readiness assessment*). Catherine responded that the information was very helpful, but she did have a question: "Do you have comparative descriptions of nursing and speech pathology majors?" Delores replied that these descriptions existed and used one of the computers located in the career library area to show Catherine where the information was located in the *Undergraduate Academic Program Guide* (UAPG; https://academic-guide.fsu.edu/.) Catherine took screenshots of relevant information from the UAPG and thanked Delores for the assistance that she had provided.

Third Independent Study Period

Later that evening in her room, Catherine reflected on what she had learned about herself and the two options she was still considering, occasionally referring to her notes, resource guide, information handouts, or websites. As she considered the costs and benefits of each option for herself, her family, and her cultural group, she decided that nursing would be a good tentative first choice (the Valuing phase of the CASVE cycle). She also decided that speech pathology would be a good second choice if it became clear that nursing was not a good option. In order to get further institutional-specific information on nursing, Catherine read the description of the major that she found in the *Undergraduate Academic Program Guide*. She then went to her residence hall computer lab and printed additional descriptive information on the major from the College of Nursing website.

Although she was pleased with nursing as a tentative choice of major and with *nurse* as a tentative choice of occupation, she was still slightly anxious about making a commitment to nursing given her lack of experience with nursing classes and clinical work in the field. What would help her, she thought, would be information on what she could do with a nursing degree that did not involve the practice of nursing. Remembering that one of the information handouts she had used earlier dealt with this question, she reread some of the *Match Major Sheets* and information in the *Undergraduate Academic Program Guide*.

Fourth Independent Study Period

While in her room in the residence hall, she read the UAPG entry for nursing, which indicated that graduates with this degree could also work in several related fields. This helped

her to be more confident that majoring in nursing was her best option at this time. She decided not to review the career information for speech pathologist because she could return later to the career center and locate the information in the library if necessary as well as access the career center's online resources. She also reviewed her work in completing the *Guide to Good Decision-Making Exercise* to confirm her choice of nursing as a major.

Now that she had decided on nursing as a major field of study, she had to take action (the Execution phase of the CASVE cycle). She remembered her roommate saying that Catherine needed to talk to an academic adviser about admission procedures and course scheduling. Although she could just go to the nursing department and ask for help, she thought that the career center might have a contact person that would save her some time. Catherine approached Alan Richardson and asked if there was a contact person in the College of Nursing. Alan accessed the UAPG website on a career library computer and showed Catherine where she could find a contact name, e-mail, office location, and phone number.

Catherine collected her backpack and thanked Alan for the help he had provided. Alan said, "You're welcome. Stop by again in the future if we can be of any further service. If you have a minute, we would appreciate it if you would fill out our brief online survey about the services you received." Catherine agreed and filled out the survey, noting that she was able to find the information she needed and that the staff was helpful. (This descriptive data contributes to evidence-based practice.) As Catherine left the career center, she reflected that she was confident that she had made a good tentative choice of nursing as a major, as well as relieved that this important task had been completed (a return to the Communication-internal cue phase of the CASVE cycle). The subsequent positive reaction to her choice by her parents and her roommate further increased her confidence in her choice (Communication-external cue).

Outcome and Summary

This case study drew upon information from CIP theory based on phases of the CASVE cycle to demonstrate how self-help career resources and services could be delivered. Catherine had a high level of readiness for career choice. The brief screening conducted by the career practitioner after Catherine entered the career center indicated that self-help career services were appropriate. Subsequent brief follow-up interactions between Catherine and various staff members indicated that the self-help approach remained an appropriate intervention choice. Catherine was able to select the resources that she needed by using the resource guides, and Career Key was also useful in helping her select needed resources. The location data on the Career Key printout and the library signage helped Catherine locate the resources that she wanted. In addition to monitoring her readiness for decision-making, the brief interactions she had with staff members helped her access resources with minimum difficulty. These staff interactions also created a caring atmosphere in the career center. Having the combination of a supportive atmosphere and resources that were designed to work in a self-help fashion increased her confidence and motivation that she could get the information she needed to make educational and career decisions.

In terms of critical ingredients of career intervention (Sampson et al., 2020), the case of Catherine involved support (interaction with practitioners), information (sources identified on a resource guide and the Career Key index), psychoeducation (process of decision-making described on information handouts), writing (writing notes about what she was learning about her options and completing the *Guide to Good Decision-Making Exercise*), modeling

(practitioner modeling of information-seeking behavior), dosage (readiness assessment from the initial interview, corroborated by additional brief interactions with Catherine), and intervention fidelity (common staff training and supervision). Catherine generated two types of data that could contribute to an evaluation of career interventions (Sampson & Lenz, 2023; Chapter 19 of this book), including: (a) her satisfaction with the services she received based on her responses to a brief online survey that included the Career State Inventory for evidence of outputs; and (b) follow-up data on eventual employment for evidence of outcomes.

The Case of Arnie

Background

Arnie, a 19-year-old college sophomore male, came to the career center for assistance in finding information about career options related to his major in health and exercise. (Details about this career center are provided in Chapters 16 and 17 of this book.) Upon entering the career center without an appointment for services, he was greeted by Judy Isaacson, the career practitioner on duty with "What brings you in today?" Arnie indicated he wanted to find career information related to his interests and goals as well as his major. Arnie provided some demographic information using the center's online registration system and completed the Career State Inventory (CSI; Leierer et al., 2022). Judy explained that the demographic data collected during the sign-in process was used for accountability purposes. The CSI was designed to assess his career state of readiness for career and educational decision-making as explained in Chapters 4 and 8 of this book. CSI results for Arnie were Certainty = 2, Satisfaction = 2, Clarity = 0, Total = 4.

Readiness for Decision-Making

On the CSI, Arnie indicated that he was considering physical therapist or physician's assistant in the past. The CSI scores, especially Clarity = 0 and Total = 4, along with his request for career information, suggested that Arnie might be a candidate for self-help services. He indicated that he enjoyed his classes in health and exercise and was happy with his major. He appeared confident in his self-knowledge, his ability to make educational and career plans, and he was eager to engage the career advising process. Judy Isaacson used three theory-based figures: the Pyramid of Information Processing Domains, the CASVE cycle from CIP theory, and the RIASEC hexagon figure with descriptions from Holland's (1997) theory to gather more information about Arnie's career situation.

Initial Interview and Intervention

The career practitioner heard nothing in the brief interview with Arnie that contradicted the decision to use self-help services. Judy Isaacson shared with Arnie the Pyramid of Information Processing Domains and CASVE cycle figures, and explained the importance of the four domains shown in the pyramid figure related to knowledge needed for career decision-making and asked him where he located himself on the pyramid figure. Arnie indicated that he was unsure about the options domain related to occupational titles and work settings. He noted that he had never seen career decision-making pictured as in the figure and thought it was useful to know that he was more confident in the other three domains. There was no indication of complexity affecting Arnie's career decision-making and the career practitioner theorized that he

was in the Synthesis-Crystallization phase of the CASVE cycle (Sampson et al., 2020; Sampson et al., 2004), needing to explore career information to narrow his options.

In discussing the self-knowledge domain of the pyramid, the career practitioner learned that Arnie had a strong preference for Artistic things, per Holland's RIASEC theory, and had participated in many things in high school that involved creativity. These included photography, choral music, and painting. Using Holland's RIASEC theory, the career practitioner suggested that Arnie examine the [RIASEC hexagon](#) (Holland, 1997; Reardon & Lenz, 2015; see Chapter 5 of this book) and rank the descriptions of the six types in terms of most and least like him. Arnie quickly identified the Social, Artistic, and Investigative (SAI) types as most like him. The practitioner noted that those three areas were adjacent on the RIASEC hexagon indicating a higher level of consistency among his interests. (If the three letters had been opposite or alternating on the hexagon the practitioner might have opted for a brief staff-assisted intervention, completed an ILP, and suggested completing the Self-Directed Search (Holland & Messer, 2013).

Arnie indicated that the differences in the code of his major (SRE) in health and exercise and his expressed interests (SAI) might be the basis for some of his uncertainty about his options. He noted that there were no Artistic (A) or Investigative (I) codes connected to his major. Judy Isaacson thought this was a good observation based on his understanding of the RIASEC personality types and occupational codes. At this point, the career practitioner showed Arnie the *Occupations Finder* (OF; Holland & Messer, 2017) and the occupations with SAI codes in order for him to explore occupations and majors related to the combinations of his expressed interest code. After a few moments, Arnie saw the occupational title, art therapist, and asked the career practitioner where he could learn more about that option.

Judy showed him how to use O*NET (https://www.onetonline.org/) in either the career center or at home to find information about occupations. She also showed him the link to the ProfessioNole Mentors program, an entirely virtual mentoring network (https://www.career.fsu.edu/professionole-mentors-program). This program connects university students with alumni and friends of the university for career advice and guidance. Conversations are *always* initiated by students with their selected mentor. Finally, Judy recommended that Arnie complete the *Guide to Good Decision-Making Exercise* to help him further explore and prioritize occupations related to his major in health and exercise. Judy then showed Arnie how to locate the exercise on the career center's [webpage](#).

Arnie also asked about how to get training in art therapy if he decided to pursue this further and the career practitioner showed him how to use the university's online *Undergraduate Academic Program Guide* (https://academic-guide.fsu.edu/). Arnie was pleased to learn that art therapy was a major at the university, and he made plans to contact advisors in that academic program to learn more about it after reading the information about the occupation and major.

Outcome and Summary

Eager to explore more information about this new career option in art therapy, Arnie thanked the career practitioner for assistance. He indicated that his career planning needs were fulfilled for now, and that he would return to the career center if needed.

In this 20-minute self-help intervention, the practitioner initially determined that Arnie was ready to engage in career exploration and decision-making, given the absence of negative career thinking and his desire for option information.

Arnie quickly understood the concepts and typology of Holland's RIASEC model and was able to identify with the three types, Social, Artistic, Investigative (SAI). Additionally, he was able to articulate how the demonstrated characteristics of each type (e.g., helping others, participating in artistic activities, possessing scientific curiosity) were reflected in his interests and behavior. At the termination of the brief interaction, Arnie left with copies of the CIP figures and RIASEC tools (i.e., RIASEC Hexagon and the SDS Occupations Finder). He was able to use this information at home for further study regarding the career decision-making process and occupational choices. Additionally, he was provided links to online resources which can be accessed at home should he choose to investigate additional occupations not explored in this brief interaction.

This process of helping Arnie clarify his career goals demonstrates the practical use of a theory-based self-help career services delivery mode. This case revealed the importance of readiness as a component of career interventions and illustrated the effective use of CIP and RIASEC theories. He did not set up an appointment ahead of time, nor did he have to wait to receive services when he entered the center because this career center operates on a drop-in basis, meaning that students and community members can come by as needed to talk with a practitioner. Two to five career practitioners are scheduled to work with clients at any particular time, so there is seldom a wait to speak with a staff member. The practitioner guided Arnie's intervention through the lens of CIP theory and Holland's RIASEC theory while modeling information-seeking behavior. In the future, Arnie will be better equipped to engage in the career decision-making process without the aid of a career practitioner.

In terms of critical ingredients of career intervention (Sampson et al., 2020), the case of Arnie involved support (interaction with practitioners), client assessment (the Career State Inventory), information (O*NET, RIASEC Hexagon, SDS Occupations Finder, and mentoring program), psychoeducation (process of decision-making described in handouts), writing (completing the *Guide to Good Decision-Making Exercise*), modeling, (practitioner modeling of information-seeking behavior), dosage (readiness assessment during the initial interview, including the CSI), and intervention fidelity (common staff training and supervision). Two examples of types of data generated by Arnie that could contribute to an evaluation of career interventions (Sampson & Lenz, 2023; Chapter 19 of this book) include: (a) his satisfaction with the services he received based on his responses to a brief online survey that included the Career State Inventory for evidence of outputs; and (b) follow-up data on eventual employment for evidence of outcomes.

Chapter 14 Summary

These two cases illustrate how individuals coming to a career center can obtain effective career services in a self-help mode. This service-delivery mode is different from brief staff-assisted and individual case managed service delivery described in CIP theory in several ways. Individuals in self-help make decisions independently regarding the selection, sequencing, and use of resources, whereas in other service delivery modes the use of resources is guided by the Individual Learning Plan (ILP; see Chapter 7) developed collaboratively by the practitioner and individual seeking services.

This chapter demonstrated how self-help career resources and services could be delivered using CIP and RIASEC theories. In the case of Catherine, she had a high level of readiness for career choice. The brief screening that was conducted when Catherine entered the career center indicated that self-help career services were appropriate. Subsequent brief follow-up interactions between Catherine and various staff members indicated that the self-help approach remained an appropriate intervention choice. Catherine was able to select the resources that she needed by using the resource guides, and Career Key was also useful in helping her select needed resources. The location data on the Career Key printout and the signage in the library helped Catherine locate the resources that she wanted. In addition to monitoring her readiness for decision-making, the brief interactions she had with various staff members helped her access resources with minimum difficulty.

In Arnie's case, RIASEC theory was especially useful in enabling him to understand the nature of his career interests and how they could be understood in relation to options, e.g., occupations, majors. CIP theory's Pyramid helped him pinpoint the area where he most needed assistance, i.e., options knowledge. The staff interactions for both Catherine and Arnie also demonstrated a caring atmosphere in the career center. Having the combination of a supportive atmosphere and resources that were designed to be used in a self-help mode increased their confidence and motivation that they could get the information needed to make the decisions that they were facing.

In both cases, the individual exhibited a sufficient level of self-knowledge, as well as appropriate motivation and confidence in their ability to make a career choice. There are instances in which self-help services would not be most appropriate for clients. For example, the presence of negative career thoughts may significantly decrease an individual's ability to make a good career decision. Individuals with negative career thoughts may exhibit a more complex presentation when seeking services, suggesting that more practitioner assistance is appropriate. These cases provide evidence that the three-tier, service-delivery approach proposed by Sampson et al. (2020; 2004; Chapter 7 in this book) is an effective and flexible model. From a social justice perspective, the model demonstrates how to provide proportionate practitioner support for career concerns, thereby increasing individuals' access to career services (Sampson et al., 2017).

Getting the Most Benefit from Reading Chapter 14

To effectively learn the material in this chapter, complete one or more of the following activities:

- If you have had self-help career services, how was your experience similar to and different from the approach used to serve Catherine or Arnie?

- Given your knowledge of counseling theory and career development theory, what other strategies might be used to meet the needs of Catherine or Arnie?

- Visit a career center or counseling center, and without violating any confidentiality guidelines, ask a staff member to describe how self-help resources and services are provided to individuals. How is the process similar to and different from the CIP theory-based approach?

- Talk with a friend or colleague about how the self-help strategies described in this chapter can be used to provide individuals with assistance in making career choices.

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CHAPTER 15
INTERNATIONAL USE OF CIP THEORY

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This chapter presents information on how CIP theory has been applied in international settings. After reviewing this chapter, readers should have a sense for CIP's applicability in different cultures. The chapter begins with a discussion about adapting CIP theory for different cultures and nationalities, and continues with an examination of cultural and national considerations in the use of CIP theory-based assessment measures, and early international applications of CIP theory. The chapter continues with examples of contemporary international use of CIP theory in selected countries, current US national programs associated with application of CIP theory internationally, CIP theory activity with global career development associations and organizations, current international career development trends, and future international applications of CIP theory. The chapter ends with a chapter summary and recommendations for getting the most benefit from reading the chapter.

Adapting CIP Theory for Different Cultures and Nationalities

A variety of considerations associated with the application of career theory internationally, including CIP, are addressed in the following sections.

Rationale for the Use of CIP Theory at the International Level

Cognitive information processing theory (CIP; Peterson, et al., 1991; Sampson et al., 2004; 2020) has been rooted in applications at the international level since its inception. For example, an International Teleconference on Technology and Career Development (Sampson & Reardon, 1989) was hosted by the Florida State University (FSU) Center for the Study of Technology in Counseling and Career Development which influenced early international applications of CIP theory.

Cognitive information processing theory offers several advantages in international applications. For example, CIP theory is very practice oriented. It should be noted that cognitive information processing theory (CIP; Sampson et al., 2004) originated in 1971 at Florida State University as career development researchers, who were strongly engaged in the delivery of career services, integrated years of practice and research to create CIP theory. As a result, CIP theory evolved from the practice of delivering career interventions in a higher education setting.

Garis et al. (2020) noted that a benefit of CIP theory, in relation to the context of international consultation and program implementation, is its practical orientation. CIP theory was designed to integrate theory, research, and practice (Sampson, 2017); thus, its key principles are supported by a substantial evidence base (Sampson et al., 2020) and lend themselves to hands-on application by practitioners. These practical constructs include the CIP pyramid of information processing domains and the CASVE Cycle (see Chapter 2), both of which can be easily visualized and adapted for use in session with clients (e.g., the *Guide to Good Decision-Making Exercise*; Sampson et al., 2015). CIP theory thus represents an approach that can be readily learned and applied by newly trained practitioners, making it a good fit for career services centers at the international level. Indeed, applications related to the implementation of career interventions are woven throughout CIP theory and offers advantages for its use globally (Osborn et al., 2018).

**CIP theory as an Efficient Organizing Model
for the Delivery of Career Interventions**

As Sampson, Osborn, and Bullock-Yowell (2020) noted, "theory can be used to identify constructs for differentiating the type and amount of assistance clients need to maximally benefit from a career intervention" (p. 695). CIP theory offers tremendous advantages in providing career interventions in an efficient manner that do not rely on traditional individual career counseling as a primary program delivery model, and this aspect of CIP theory cannot be overstated enough. As a result, CIP theory offers a service delivery model for many counties with career centers that are already challenged with budget and staffing limitations. Some ingredients of CIP theory described earlier (Sampson et al., 2004; 2020) that contribute to its efficiency include a differentiated service delivery model (see Chapter 7). CIP theory's service delivery model takes into account that increasing numbers of individuals with varying needs are seeking career services and increased funding is often not available to meet this increased demand. This approach is in keeping with the career development field's emphasis on social justice in providing career and workforce programs (Sampson et al., 2017). As a result, career

center staff need to explore different models for meeting the career needs of individuals. Limiting staff time in delivering individual case-managed services leaves more staff time for providing brief staff-assisted and self-help interventions that serve more individuals, or longer services for individuals with more extensive needs (Sampson, 2008). This differentiated service delivery model has been characterized as "the intelligent allocation of scarce resources" (A. G. Watts, personal communication, 2002) resulting in cost-effective career interventions where the right resource is used by the right individual with the right level of practitioner support that is delivered at the lowest possible cost (Sampson et al., 2020).

Additionally, CIP theory features a career decision-making readiness approach that considers the internal capability of an individual to make appropriate career choices taking into account the external complexity of family, social, economic, and organizational factors that influence career development. Additional aspects of CIP theory that contribute to its efficiency include creating individual learning plans (ILP; see Chapter 7) and attention to client screening by using readiness assessment measures such as the Career Thoughts Inventory (CTI; Sampson et al.,1996) and the Career State Inventory (Leierer et al., 2022). Finally, CIP theory can be used with other theories since it is seen as an organizing theory that is compatible with other theories to meet specific needs. For example, CIP theory regularly includes many applications of Holland's RIASEC theory including the Self-Directed Search (SDS; Holland & Messer, 2013; Reardon & Lenz, 2015). See Chapter 5 of this book for a more detailed examination of the integration of CIP and RIASEC theory. As noted above, when taken collectively, these examples of CIP theory concepts offer considerable advantages for use in the delivery of career interventions at the international level by career centers who often face budget and staffing challenges.

Using CIP Theory in Creating or Enhancing
the Mission of International Comprehensive Career Centers

International consultations often involve creating new or enhancing existing career centers with the goal of establishing a comprehensive array of programs. Vernick et al. (2000) noted that college and university career centers would generally be considered to be comprehensive in offering the following core programs and services:

1. Career advising and intake

2. Individual and group career counseling

3. Assessment and computer-assisted guidance

4. Career information

5. Career planning classes for credit

6. Career education outreach

7. Experiential education

8. Career expositions

9. On-campus recruiting

10. Job listings and resume referral services

The Florida State University (FSU) Career Center offers all of the above core services (Vernick et al., 2000). The application of CIP theory in the FSU Career Center has demonstrated that the theory can be used in assisting other international career centers aspiring to become "comprehensive."

Challenges in Applying Career Development Theory in International Consultation

Obviously, there are an array of cultural influences that mut be considered in international career center consultation based upon CIP or any other theory. First, language must be carefully considered as much meaning can be lost in translation. Additionally, most career development theories including CIP address values which are influenced by local, regional, and national factors.

Osborn et al. (2020) noted that: CIP theory encourages practitioners to explore and consider the unique backgrounds of individuals seeking career assistance. A key element of CIP theory is the examination and evaluation of an individual's beliefs and values, whether it is culturally or personally, throughout each of the information processing domains (i.e., self-knowledge, options knowledge, decision-making, executive processing), and the extent to which these beliefs and values impact client readiness. This goal to first understand certainly applies to transnational application of career theory, in that recommending the adoption of a particular career theory or career service delivery model requires a thorough understanding of the cultural context of that setting in determining the appropriateness of that theory for the individuals being served. Additional challenges commonly associated with the international application of CIP theory include economic, labor market, political, social, environmental, and related factors. The following review (Garis et al., 2020) of environmental factors associated with a consultation in the Philippines serves as an example.

Despite boasting a resilient economy during the global financial crisis of 2008 (Central Intelligence Agency [CIA], 2023), as well as steady growth in industries like construction and business services (Tolentino et al., 2013), the Republic of the Philippines also faces social stressors which significantly impact the career development and decision-making of its residents. One in five Filipinos lives in poverty, while most of the country's wealth is concentrated in the hands of the elite (CIA, 2023). Underemployment remains chronically high, around 18% in the general population (CIA, 2023; National Statistics Office [NSO], 2019). This problem is especially prevalent among young people, as many recent graduates have difficulty finding work commensurate with their education and skill level (Tolentino et al., 2013). Fierce competition for jobs, combined with longstanding government policies that facilitate the export of Philippine labor, have led many workers to seek employment abroad (Tolentino et al., 2013). These career challenges are further exacerbated by the aforementioned mismatch between academic training programs and the demands of local business and industry.

These economic pressures, combined with the core Filipino value of family belongingness, or *pagkapamilya*, results in a unique cultural context for career development (Tuason, et al., 2012). Indeed, Filipina psychologist Rose Marie Salazar-Clemeña (2002) identified devotion to family and desire for economic mobility — "family ties and peso signs" (p. 251) — as key influences on the vocational choices of Filipino students. Consequently, young people often choose career paths according to family input, prestige, and perceived opportunities for social mobility. Unfortunately, it is not uncommon for students and their families to base

these decisions on misinformation and occupational stereotypes (Salazar-Clemeña, 2002), a problem that has further highlighted the need for improved communication between Philippine educators and employers, as well as increased access to career interventions to help individuals and their families make well-informed career choices.

The mismatch between academic training programs and the demands of local business and industry noted above is indeed a global phenomenon found in all countries. While this gap will not be closed completely, it can be managed through informed career decision-making (knowing how I make decisions) via CIP theory and its pyramid (Sampson et al., 2020) including consideration of internal self-information (knowing about myself) and external information such as economic/labor market (knowing about my options).

Cultural and National Considerations in the Use of CIP Theory-Based Assessment

Using any assessment measure requires specific knowledge and skills. In addition, NCDA devotes an entire section of its Code of Ethics to assessment and evaluation to guide practitioners in the ethical use of assessments. Career practitioners are urged to use caution when using an assessment that was normed on a population different from the clients. The CTI and SDS have both been translated and used in multiple languages and countries. When using a CIP theory-based career assessment in a country where it has not been validated, care should be given to ask additional questions, such as, "What other things do you say to yourself about your career decision?" or "How do you typically go about making a career decision?" or "What other interests do you have?" rather than presuming than an inventory comprehensively covers every aspect of self-knowledge. Fouad and Kantamneni (2020) noted that cultural values may be "more influential for some clients than are traditional career planning variables such as interests" (p. 333). With respect to matching self-knowledge to options, or linking to occupational information, or even using an occupational card sort, a practitioner should know the feasibility of obtaining the required training for specific occupations and if the occupation is typically found in that setting. Often times, assessments linking self-knowledge to options imbed links to information about those options. Some information sources, such as O*NET, while appropriate for the US, may not provide accurate job task descriptions, educational requirements, or salary ranges for an occupation with the same title in another country.

Early International Applications of CIP Theory

As noted earlier, internationality is woven throughout the fabric of CIP theory as exemplified through its theoretical concepts based on the importance of theory to practice, publications, conference presentations, consultations, and international visitations. Figure 15.1 shows consultations and international visitations by the Career Center and Tech Center staff, as well as international visitors hosted by the FSU Career Center and Tech Center.

Figure 15.1

International Visitations and International Visitors

International Visitors

Visitors to the Florida State University Career Center and the Center for the study of Technology in Counseling & Career Development, 1986 - present.

1. Argentina
2. Australia
3. Austria
4. Bahamas
5. Barbados
6. Canada
7. China
8. Costa Rica
9. Czech Republic
10. Denmark
11. Egypt
12. England
13. Finland
14. France
15. Germany
16. Hungary
17. Iceland
18. Indonesia
19. Iraq
20. Ireland
21. Israel
22. Jamaica
23. Japan
24. The Netherlands
25. New Zealand
26. Nigeria
27. Northern Ireland
28. Norway
29. Pakistan
30. Philippines
31. Portugal
32. Russia
33. Romania
34. Saudia Arabia
35. Scotland
36. Singapore
37. South Africa
38. South Korea
39. Spain
40. Sweden
41. Taiwan
42. Thailand
43. Trinidad and Tobago
44. Turkey
45. Uganda
46. Vietnam
47. Wales

Visited Internationally

Places where faculty and staff from the Florida State University Career Center and the Center for the Study of Technology in Counseling & Career Development have presented, consulted, or provided technical assistance, 1986 - present.

1. Australia
2. Barbados
3. Canada
4. China
5. Costa Rica
6. Denmark
7. England
8. Finland
9. France
10. Germany
11. Greece
12. Hungary
13. Iceland
14. India
15. Ireland
16. Italy
17. Jamaica
18. Japan
19. New Zealand
20. Northern Ireland
21. Philippines
22. Portugal
23. Romania
24. Scotland
25. South Korea
26. Sweden
27. Trinidad and Tobago
28. Turkey

While a review of all of the international activity associated with CIP theory is beyond the scope of this chapter, a few examples of early applications follow.

Northern Ireland

CIP theory and the differentiated service delivery model was applied in the Northern Ireland Careers service (Northern Ireland Department for Employment & Learning and the Department of Education, 2008). Northern Ireland career services were particularly interested in CIP theory as it promotes a triage model of service delivery that encourages efficient and socially responsible use of career center resources (Toh & Sampson, 2021). The context of the Northern Ireland political and economic environment at the time necessitated an approach to

career center development that was economical, practical, and compatible with its values. As a result, CIP theory proved an excellent fit.

Costa Rica

The FSU Career Center and Tech Center partnered in a series of visitations to FSU and in-country consultations to career centers in Costa Rica and the West Indies. The University of Costa Rica (UCR), Turrialba Career Center became interested in CIP theory and the application of technology in the delivery of career interventions. UCR, Turrialba established the office of Vocational and Occupational Guidance (COVO) and FSU Career Center-Tech Center staff visited to support the establishment of its new facility and donated a computer for use in its technological applications in May 1995 and May 1998. A present UCR program of COVO is the design and maintenance of computerized systems for vocational-occupational guidance in support of its "Vocational-Occupational Axis."

Jamaica

A partnership similar to UCR and COVO was established with the University of the West Indies (UWI) in Jamaica through a series of staff exchanges and visitations often highlighting the application of CIP theory. The consultations culminated in participation in Jamaica's National Career Development Awareness Week in 2013 and included a review of CIP theory.

People's Republic of China

CIP theory has also supported the evolution of career centers in the People's Republic of China. Once again, this partnership included visitation to the FSU Career Center and Tech Center by a representative of the China Ministry of Education, as well as in-country consultations in 2000 and 2002 (Garis et al., 2003). The in-country consultations included presentations at conferences sponsored through the Ministry of Education to approximately 100 career center directors in 2000 and 200 career center directors in 2002. These conferences were organized to support the evolution of China's university career programs delivered through past *Offices of Job Assignment* to *Career Centers* that were more focused on freedom of individual choice. The consultations in support of the development of a Chinese national career services delivery model (Garis et al., 2003) included:

- Delivery of career guidance, information and assessment including the use of a translated version of Holland's Self-Directed Search (1994) published by PAR.

- Application of theories of career guidance to the delivery of career services including Holland (1997), Super et al. (1996), and Sampson et al. (2004).

- Delivery of an array of career services such as career advising/counseling, outreach programs, experiential education/internships and employment recruiting programs. It was suggested that career centers offer comprehensive services based on a centralized model as described by Vernick et al. (2000).

- Development of computer-based applications to the delivery of career services using applications such as computer-assisted career guidance systems, career center web-based information and recruiting software systems.

Clearly, through the above presentations delivered to over 300 career center directors, CIP theory has been influential in the delivery of contemporary career services in People's Republic of China.

Canada

In Canada, Lighthouse Labs (LHL; https://www.lighthouselabs.ca/) was created by software developers in response to national employment demands for an increase in skilled workers in computer coding (Gordon, 2020). A component of this program was to engage in high quality mentorship and career guidance as a majority of graduates of the program (i.e., over 70%) were designated as job seekers. The multifaceted program has career practitioners engaging with both employers and job seekers to provide comprehensive career support. The initial modality of engagement with job seekers in relation to the differentiated service delivery model was individual case management. The increases in student cohort sizes required adaptation of this model. The program involves a 12-week curriculum and covers such topics as completing a resume, job search strategies, and interviewing. There were other elements that were tailored to the needs of the program. The names of specific components of the pyramid information processing domains such as values within self-knowledge being renamed "goals" and options knowledge being designated as "industry knowledge."

CIP theory was selected as a framework for the program in Canada for several reasons. First, the simplicity of the theory such as the pyramid of information processing and its components (i.e., self-knowledge, options knowledge, decision-making, and metacognitions), Second, the focus on metacognitions and reframing techniques was indicated by the facilitators as distinctive from other approaches (Gordon, 2020). Finally, CIP theory was selected because of the empirical support for the approach.

Components of CIP theory were infused into class presentations on aspects of career. The pyramid of information processing was shared with the students with adjustments to specify the application of the various areas to the topic of focus (e.g., what's involved in building a resume, thinking about the job search, what's involved in the interview process). Finally, a version of the pyramid was provided which identified elements to consider beyond the completion of the training. This adaptation was indicated as necessary to specifically connect the CIP theory framework with the audience. Consultation occurred among those facilitating the program to determine appropriate strategies for tailoring the information. Though fidelity to the approach is important given the empirical evidence linked to the existing CIP theory-based structure, some degree of modification is worthy of consideration in order to best serve clients in their local setting.

A core tenet of CIP theory is the ongoing systematic evaluation of the delivery of services to determine outcomes (Sampson, 2008; Sampson & Lenz, 2023; see also Chapter 19 in this book). Upon completion of the program, participants in Canada were asked a series of questions related to their experience. On a scale ranging from 1 (strongly disagree) to 5 (strongly agree), students at two locations indicated their perspective on the impact of the program on such questions as, "The workshop helped me to identify what's involved in finding and securing my first development job," "The workshop helped me to learn how to make effective career decisions," "This workshop helped me learn to think positively about what I have to offer." The responses of those who received support at two different locations ranged from 4 to 4.57 indicating a strong positive response to the CIP theory-informed program (Gordon, 2020).

Recommendations for future teaching based on this information include implementation of the readiness model to reform the current case management model. Ongoing evaluation will continue to ensure the positive impact of this approach.

Finland

In Finland, international collaborators and research associates in the FSU Career Center-Tech Center provided a pilot intervention of the "On Career Path" group counseling intervention (Rantanen et al., 2020). This booster intervention was developed in response to 68% of university students reporting receiving less career guidance and counseling from the staff than they desired (Rantanen et al., 2020).

Within Finland's educational system, there are dual paths related to education and vocational training. Career services in Finland are designed to improve the skills and competencies required within the workforce. Career planning services, information about the labor market, and training to improve working-life skills are mechanisms of support aimed at meeting this goal. A specific education institution, the University of Jyväskylä (JYU), has based their guidelines for high-quality services on CIP theory's differentiated service delivery model with varying degrees of support based on the needs of those receiving services.

The "On Career Path" Program provided university students at JYU with the opportunity to reflect their future related questions and career concerns that arise out of interfacing with labor market information provided by an online service. Components of CIP theory, such as self-knowledge, options knowledge, the CASVE cycle, and metacognitions, served as the framework for the career planning process. The DOTS-model (Law & Watts, 1977; 2003) and career adaptability (Savickas & Porfeli, 2012) are additional approaches that were integrated into the framework.

The seven main themes of the "On Career Path" online service included 1) values, 2) skills and competences, 3) self-confidence, 4) networking, 5) opportunities, 6) decision-making, and 7) preparing for entering working life (Rantanen et al., 2020). These themes are linked to specific components of CIP theory (i.e., themes 1, 2, and 3 with self-knowledge; 4 and 5 connected to options knowledge, 6 and 7 associated with the metacognitions. The group counseling intervention was implemented with the aims of enhancing working life skills and networks, career planning during studies, and preparedness for life after graduation (Rantanen et al., 2020).

The effect of the "On Career Path" program was measured via the Career State Inventory, the Career Thoughts Inventory, and a set of employability questions designed by the facilitators. Though a small sample size, there were encouraging results with lower levels of negative career thoughts, higher degrees of career decision preparedness, and a significant increase in perceived employability. Though the indicators did not fully hold in a follow-up assessment for all students, an additional finding of note is that those with the lowest degree of readiness seemed to benefit most from the intervention.

This example demonstrates the adaptability of CIP theory within a group counseling intervention. In addition, CIP theory seems to integrate well with other career theories. Though CIP is substantive on its own with a developed theory and substantial evidence of its benefit, it is possible to integrate other career theories in the development of interventions.

Iceland

The largest university in Iceland provides another example of a Nordic country implementing a CIP theory-based counseling approach (Björnsdóttir & Lenz, 2020). The university student counseling and career center (UISCCC) provides a variety of services such as academic counseling (e.g., study choice, study skills, exam preparation and techniques) and career counseling (e.g., job search, resume-writing, interview preparation). A unique dimension of this facility is that the counselors also manage disability services, meaning they support those with various concerns such as learning difficulties, psychological problems, neuropsychological concerns, and autism. This unique circumstance of career and mental health services being addressed within one facility has implications for those providing services.

With the aim of assisting students in the decision-making process and to encourage them to gather information about study programs and occupations and to process this information, a theoretical-based framework and counseling approach that addresses these elements was pursued. CIP theory and specifically the *Guide to Good Decision-Making Exercise* (GGDME) was selected due to the manner in which it mapped onto the goals of the intervention. The GGDME was combined with the Icelandic Interest Inventory (III), a Holland-based interest inventory. Within a group counseling modality, participants completed the interest inventory and used the information to inform the completion of a handout that included the GGDME and an ILP. Resources were also included in the handout. Along with the group session, two hours long individual career choice sessions were added to the intervention.

Counselors perceived that students were more satisfied with the individual appointments as opposed to the group sessions. The addition of the handout seemed to have contributed to an increase in engagement on the part of the participants. A few recommendations were born out of this experience. First, piloting the use of the GGDME with a smaller group of students prior to mass implementation especially with different countries and cultures can provide insight into needed accommodations. Second, providing a post-session evaluation may offer insight into the experience of those receiving services. Finally, Bjornsdottir and Lenz (2020) noted the potential value of adding the CTI due to its usefulness as a measure of readiness.

South Korea

The financial crisis in Asian countries in 1997 brought about changes to South Korean society and the economy. The South Korean government and universities began to take more active roles to prepare college students for employment. The Korea University Career Development Center (KUCDC) has evolved their service delivery over time to accommodate these shifts in the economy impacting students entering the workforce.

CIP theory and specifically the differentiated service delivery model was implemented to manage the needs of those receiving services. Adapting the modality of service delivery based on an intake aligns with CIP theory's tenet of right-sizing career services based on readiness. This screening and selection process is informed by assessing readiness and using this information to determine the appropriate support. Those with high readiness received career development programs, those with moderate readiness engaged in career workshops, and those with low readiness received individual career counseling (Ahn, 2020).

An instructive aspect of the implementation of CIP theory at KUCDC was the phased implementation approach. *Phase I* involved the transformation of physical resources in the

facility to ensure that those who visited were greeted upon arrival, were provided access to resources while waiting to meet with a practitioner, and appropriate meeting space was divided from administrative offices for the sake of privacy. *Phase II* entailed the strategic placement of human resources. Credentialed career practitioners and graduate counseling students were brought on to ensure students interfaced with an informed professional. *Phase III* was implemented with the goal of rearranging or developing components of career services. The menu of assessments and their use in career counseling, the development of career workshops, the physical resources such as career resource guides and information handouts, the implementation of drop-in services, and the reconfiguration of existing programs were aspects of this transformation to align with CIP theory concepts. *Phase IV* involved the evaluation of career services via a measure of vocational identity. Finally, *Phase V* focused on professional development for staff with information on various topics such as CIP theory-based service delivery, helping skills, labor market, and career development theories and practices (Ahn, 2020).

The use of the differentiated service delivery model was found to increase capacity of the facility to provide services while simultaneously increasing vocational identity and satisfaction with services. Findings suggest that in-take facilitators appropriately referred those with low readiness to the individual case-managed (i.e., career counseling) service. Individual career counseling was also found to be effective in relation to vocational identity and satisfaction. This intentionality in the development, implementation, and evaluation of services provides a roadmap for those interested in organizing their career services around CIP theory. Additional consideration by those at KUCDC is being paid to expanding the brief-staff assisted modality of service delivery (Ahn, 2020).

Uganda

Nsubuga and Ivins (2020) implemented CIP theory at the Makerere University's career counseling center, one of the oldest English-language universities in Africa. Despite a doubling of the gross domestic product since 2012, employability remains a concern for college students in Uganda. Those with college degrees experience fierce competition from others when pursuing employment creating an environment of elevated anxiety and feeling of hopelessness.

Within Uganda, the stigma of nepotism and favoritism within the job market have created negative perceptions of the market that impact self-esteem and self-efficacy. Though progress has been made, gender inequality in the types of work women have access to creates additional challenges.

With the goal of delivering career services in a holistic and culturally responsive manner while also being efficient, economical, and teachable to students, CIP theory was selected as the theoretical basis for the delivery of services at Makerere University. The varying degrees of decidedness has relevance in this setting due to the characteristics of the Ugandan marketplace. As a result, individual case-managed services were utilized in this setting.

The facility's director made deliberate efforts to learn the CIP theory-based approach and adapt it to the needs of those served in his center. Though financial resources are not plentiful, the CIP theory framework provides a means of providing quality services for addressing a variety of concerns in various formats such as groups. The focus on metacognitions also enables attention to be paid to the cognitive and emotional components of career decision-making and

problem-solving, especially the pervasive message of "you must know the right person" in order to succeed. Additional resources have been requested for expanded capacity to further address the concerns of those in need.

Australia

Though a variety of international settings have been described, little attention has been paid to career services in K-12 settings (Hughs & Hyatt, 2020). In Australia, CIP theory has been implemented in a high school setting. Though an extensive career program existed, the challenge of being able to meet the needs of a larger population of students necessitated the need to utilize a framework that expanded the reach of career services.

The differentiated service delivery model was implemented to increase capacity for meeting the needs of students. The implementation process occurred in stages, beginning with 11th grade students and then subsequently enacted with 10th and 12th grade students. In order to assess readiness to determine the degree of support a student might need, various assessments for career adaptability, vocational identity, and career indecision were utilized. When students were classified as low, moderate, or high readiness, they were channeled to the appropriate modality of service. Students were also provided the opportunity to self-refer to a higher or lower level of career service. Parents/guardians, teachers, and student counselors often referred students to individual case-managed services.

The service delivery model based on career decision-making readiness assessment enabled the career program to deliver targeted support without overserving or underserving students. This approach allowed also for the targeting of services to the needs of specific "at risk" groups in need of more intensive support (Hughs & Hyatt, 2020). In addition, the creation of online resources via a website based on the components of CIP theory's pyramid of information processing allowed for self-help services to be enacted.

Lessons were learned regarding the adaptation and implementation of various aspects of CIP theory. First, the use of ILPs can create challenges in relation to managing the time with students. Following-up with people on their progress with goals on the ILP was difficult given the limited, ongoing contact of brief-staff assisted services. In addition, the website has been minimally accessed creating the need for enhanced marketing efforts. Ongoing monitoring and evaluation of the implementation will enable continual improvement of this CIP theory-based framework for supporting k-12 students.

Current US Programs
Associated with International Application of CIP Theory

Philippines

From 2014 to present, CIP theory has played an important role in developing over 20 university career centers in the Philippines. The FSU Career Center and the FSU Learning Systems Institute (LSI) partnered in a project entitled Science, Technology, Research and Innovation for Development (STRIDE). The Philippines project is a multi-year, $32 million

project funded by the U.S. Agency for International Development (USAID)[63]. The development of university career centers was among the priorities of the STRIDE project (Garis et al., 2020) due to several factors including:

- University career programs in the Philippines were limited and often based in guidance offices with no designated career center office.

- National underemployment of college graduates.

- The aforementioned mismatch between university academic training programs and the demands of local business and industry in the Philippines.

CIP theory was included in the STRIDE university career center project due to a variety of factors noted earlier by Garis et al. (2020) including:

- Selection of the FSU Career Center as a model office that is based on CIP theory.

- Its application to career programs at the international level.

- Its practicality with theoretical concepts based on the importance of theory to practice.

- The cost-effective and efficient differentiated career services delivery model, including: peer career assistant programs, self-help & information, brief staff assisted career advising, referrals for individual career counseling.

The STRIDE Career Center project conducted by FSU included 20 universities with training programs provided in five batches over the seven-year span. University participants from the Philippines are shown in Table 15.1.

Table 15.1

Participants in the STRIDE University Career Project Sponsored By Florida State University

Batch One:
1. University of Science and Technology of Southern Philippines
2. Palawan State University
3. Western Philippines University

Batch Two:
4. Ateneo de Davao University
5. University of Southeastern Philippines

Batch Three:
6. Batangas State University
7. Far Eastern University
8. Jose Rizal University
9. Mariano Marcos State University

Batch Four:
10. University of San Carlos
11. Mindanao State University-Iligan Institute of Technology
12. University of San Agustin
13. Western Mindanao State University
14. University of Science and Technology of Southern Philippines-Oroqueta Campus
15. University of Science and Technology of Southern Philippines-Claveria Campus

Batch Five:
16. Angeles University Foundation
17. Holy Angel University
18. University of Cordilleras
19. Mapua Manila
20. Bicol University

It should be noted that, in addition to the 20 schools addressed through the FSU sponsored STRIDE Project, three additional schools were part of the initial STRIDE project and were not delivered through FSU and consequently were not based upon CIP theory. These schools included: PHINMA University of Ilolilo, The Technological Institute of the Philippines, and the University of Santo Tomas.

The 20 STRIDE university career centers (delivered by FSU) were framed through the CASVE cycle (Sampson et al., 2004; 2020). Figure 15.2 provides an outline of the applications of the CASVE cycle in the STRIDE career center project.

Figure 15.2

Applications of the CASVE Cycle in the STRIDE Career Center Project

Applications of the CASVE Cycle in the STRIDE Career Center Project

STEP 1 — C

Identify the "Gap"
- Limited career programs housed inside guidance offices
- Use of antiquated placement model
- Disconnect between academe and industry

STEP 2 — A

Analyze Needs
- Comprehensive career center with director
- Theoretical basis for career counseling
- Collaboration with guidance counselors and academic programs
- Additional career planning assessments
- Expanded services (e.g., alumni networking database, online website with supporting resources, Employer Partner-Recognition Program, Peer Career Assistant Program, database for job listings and student resumes, pre-OJT programs)

STEP 3 — S

Generate Potential Solutions

STRIDE recommendations:
- Evolve from guidance/placement services to career center model
- Use CIP theory as theoretical foundation
- Serve as point of contact and conduit for employers interested in posting jobs and recruiting/hiring graduates
- Partner with colleges/academic departments
- Professionalize career services to meet standards

STEP 4 — V

Develop Individual Proposals
- Each participating university submitted individual proposals for career center creation
- Career center plans were aligned with institutional values
- Proposals were reviewed and revised

STEP 5 — E

Launch Career Centers
- Career center launches have been planned for all 20 universities involved in the FSU-sponsored STRIDE project
- Several career centers based on the STRIDE project have already been launched, with more planned for 2020
- The USAID STRIDE Career Center Extension Project will host a two-day conference in March 2020 involving all participating career centers as it plans for the project's completion

The STRIDE career center project in the Philippines included on-site training programs and, in some cases, visitations to the United States by selected administrators and new career center directors. The US-based visits included orientations to the FSU Career Center and overviews of the CIP theory to practice model. All STRIDE Career Center training programs conducted in the Philippines addressed the following topics:

- Why develop career centers in the Philippines

- Career development theory

- Career counseling process

- Career information

- Career planning assessment

- Experiential education

- Employer relations

- Career center standards and competencies

- Policies and procedures

- Budget and staffing

- Program planning and evaluation

- Student assistant training addressing topics such as resume/letter/writing and job search skills

- Discussions with stakeholders including the President, senior administrators, faculty, guidance staff, on-the-job (OJT) staff, students, alumni and government/community agency representatives.

- Check list for next steps in creating a university career center.

A STRIDE "Career Center Starter-Kit" was provided to each school that included several popular career information books on topics such as job-seeking skills, resume/letter writing and interview skills. These books served as a foundation for creating a career library. Also, copies of Holland's Self-Directed Search (Holland & Messer, 2013) and supporting manuals were provided as an initial career planning assessment measure. Finally, the kits included the text based on CIP theory—*Career Development & Planning: A Comprehensive Approach* (Reardon et al., 2022).

As noted above, career development theory including CIP was part of the training programs. It is important to note however, that additional foundational and contemporary career development theories were addressed as well providing participants with a variety of optional approaches. As chronicled above, CIP theory has played an important role in standing up new university career centers in the Philippines. Additionally, due in part to its success in establishing new university career centers, the STRIDE project was extended through 2022 by USAID. STRIDE estimates that newly established career centers at over 20 universities are providing services benefitting over 220,000 students (RTI International, 2022).

Lebanon

From 2019 to present, CIP theory has played yet another important role in developing or enhancing university career centers in Beirut, Lebanon. The FSU Career Center and the FSU Learning Systems Institute (LSI) partnered with the Educational Development Center (EDC) in a project entitled Higher Education Capacity Development (HECD) Program. The Lebanon project is a five-year project funded by the U.S. Agency for International Development (USAID)[64]. The five-year HECD (July 2019-June 2024) USAID Lebanon program delivers institutional capacity building and professional development to higher educational institutions (HEI's). The program aims to improve the organizational effectiveness of selected universities to help students contribute to the economic development of Lebanon.

By 2024, USAID, EDC and the HECD Program will assist nine HEI career centers in equipping thousands of students with 21st century job readiness skills and learning experiences for successful entry into local and international labor markets. Figure 15.4 provides the Lebanon universities participating in the HECD project.

Table 15.2

University Participation in the Lebanon EDC Higher Education Capacity Development Project Sponsored Through the Florida State University

1. American University of Science and Technology
2. Haigazian University
3. Holy Spirit University of Kaslik
4. Notre Dame University-Louaize
5. Saint-Joseph University of Beirut
6. Antonine University
7. Beirut Arab University
8. Islamic University of Lebanon
9. La Sagesse University

In February 2020, HECD met with HEI senior leadership teams to capture baseline Continuous Institutional Maturity Assessment (CIMA) data for career centers and define capacity building priorities. CIMA used a participatory auto-assessment process designed to empower each HEI to track capacity improvements over time in relation to baseline measures, identified capacity gaps, and priority action steps. Supporting university career centers emerged as the focal point of the HECD Project and were found to vary in their level of comprehensive program development. Indeed, some universities in Lebanon did not have career center offices while others were rather comprehensive but required program enhancements. A common limitation among all of the Beirut university career offices was a lack of understanding of career

development theory. As a result, CIP theory was introduced to all HECD participating universities.

As a result of the global pandemic, career development programming including CIP theory was delivered through virtual webinars, trainings, and e-mentoring strategies during 2019 and 2020. An initial in-person visit to Beirut was conducted in January 2022, that included career office visitations with selected HECD HEI's. A study tour planned for March 2022 included 21 representatives from the nine participating schools and visitation with the FSU Career Center and Tech Center. Program topics included in the visit were presentations from CIP theorists and CIP theory applications to practice programs. Additionally, all 21 study tour participants were provided with a digital copy of the text, *Career Development and Planning: A Comprehensive Approach,* 7th ed., (2022) by Reardon, R. C., Lenz, J. G., Peterson, G. W., & Sampson, J. P., Jr. Additional in-country training programs were planned as a follow-up to the FSU study tour visit. The Beirut-based training included on-site university training addressing the application of CIP theory within the respective career centers. Clearly, CIP is serving as a theoretical underpinning for the nine universities participating in the HECD career center project concluding in June 2024.

CIP Theory Activity with Global Career Development Journals, Associations and Organizations

This chapter has focused primarily on global, country specific applications of CIP theory. It should be noted that publications and presentations associated with international applications of CIP have been woven throughout the theory past and present. Much of this international activity regarding research publications and presentations can be found at the Center for the Study of Technology in Counseling and Career Development (the Tech Center) website. However, while certainly not exhaustive, examples of CIP theory-related activity associated with international journals and professional associations are provided in Tables 15.3 and 15.4.

Table 15.3

Examples of International Journals Publishing CIP Theory Applications and Research

- Asian Journal of Counselling
- Australian Career Practitioner
- Australian Council for Educational Research (ACER) Press
- Australian Journal of Career Development
- British Journal of Guidance and Counselling
- International Association for Educational and Vocational Guidance Journal
- International Journal for Educational and Vocational Guidance
- Japan Institute of Labor Research
- The Canadian Journal of Career Development

Table 15.4

Example International Organizations Hosting Presentations Regarding CIP Theory

- American Psychological Association-Canada
- Asian Pacific Career Development Association
- Australian Association of Career Counsellors
- British Psychological Society
- Careers Scotland Exposition
- China Second International Forum on Career Planning
- Department for Education and Skills, Learndirect, and HECSU, United Kingdom.
- Educational Testing Institute of Iceland
- European Commission Conference on Computers and Careers Guidance-Germany
- European Conference on Information and Communications Technology in Guidance-Sweden
- Finnish Ministry of Employment and the Economy and the Finnish Psychological Association
- IAEVG International Conference-Finland
- IAEVG International Conference-Germany
- IAEVG International Conference-Italy
- IAEVG International Conference-New Zealand
- IIBK World Bank Employment and Counseling Services Project, Turkey
- Institute of Career Guidance, Northern Ireland
- International Conference for Trainers of Educational and Vocational Guidance Counsellors-Denmark
- Japan Institute of Labor and the University of Kanasi
- National Centre for Guidance in Education-Ireland
- Second Conference of Vocational and Occupational Counseling-Costa Rica

Current International Career Development Trends

Geo-Political, Economic and Labor Market Trends

All nations aspire to a prospering economy and strong labor market. The contribution of higher education and training in producing qualified graduates holding employability skills is among the important factors contributing to strong national economic development. University career centers that are based upon theoretical approaches have an important role to play in the eventual career development employability of graduates.

University Career Centers and At-Risk Youth

There is increasing interest in RFP's and grants to include programs that support the education, training and employment of at-risk youth (OECD, 2016) thereby reducing potential

interest in joining extremist movements. Once again, creating or enhancing university career centers is frequently included among grants supporting international universities.

Labor Market Economic Needs and the Workforce Qualifications of University Graduates

The gap between employer labor needs and academic training and skills of college graduates was addressed earlier in this chapter. As noted, this gap is a global phenomenon found in the United States and other countries. As long as there is freedom of career choice among college students, the gap will not be completely closed. Additionally, labor market and employment needs frequently focus on university graduates associated with Science, Technology, Engineering and Mathematics (STEM) qualifications. Of course, not all college students hold interests and/or capacity to pursue and succeed in STEM-related academic programs. However, career guidance programs helping students to make informed career choices based upon internal information (interests, values, skills, and employment preference) and learning about external information (academic programs, economic and labor market conditions) can help narrow the gap. CIP theory, as represented in its pyramid of information processing domains, is based upon knowing about myself, knowing about my options and knowing how I make decisions, and aims to foster informed career decision-making. University career centers based upon theory, including CIP, can play a role in narrowing the gap between labor market needs and student qualifications.

The Global Pandemic and Influence on University Career Programs

The emergence of Covid 19 forced all universities to change the delivery of academic programs and supporting student services including career center programs from traditional classroom learning and in-person career interventions and employer relations programs. The global pandemic served as a catalyst for the conversion of virtually all career programs to virtual delivery. Virtual applications ranged from career advising, career education outreach programming to employment events such as virtual career fairs. The development and enhancement of virtual career interventions, including those that may involve the use of new technologies such as AI (Wilson et al., 2022), will continue even after the pandemic ends resulting in a post-pandemic blend of traditional face-to-face and virtual programs offered through university career centers. With its inclusion of self-help, brief staff-assisted and individual case-managed service interventions, CIP theory is well positioned for virtual applications in global settings. For example, sophisticated on-line career resources and information support self-help and brief staff assisted interventions and reduce reliance on traditional face-to-face career counseling by appointment.

Future Collaborative International Consultation and CIP Theory

Future planned activities through 2024 associated with the Higher Education Capacity Development Program noted earlier include:

- On-site consultations in Beirut with the nine partner universities to review grant proposals for career development materials, resources, assessments, furnishings and equipment to enhance their career centers.

- A follow-up webinar addressing the implementation of CIP theory.

- A webinar supporting conducting graduate follow-up surveys.

- Final on-site consultation in Beirut with the nine partner universities to review progress via the HECD grant and implementation of CIP theory-based career interventions.

Another collaborative consulting project with the FSU Career Center, Tech Center, and Learning Systems Institute (LSI) is the Community College Administrator Program (CCAP). One feature of the project is a Florida State University (FSU) study tour for international community college visitors from countries including Egypt, Pakistan and the Philippines. On-site and virtual training programs associated with career development theory including CIP are included in the CCAP project. Additionally, collaboration and CIP theory training with the FSU Tech Center faculty and university staff from Jerusalem, Palestine is anticipated in the future.

Future directions of CIP theory are addressed further in Chapter 21. However, one additional future trend associated with international university career center consultation at FSU follows. A Memorandum of Understanding (MOU) with the Center for the Study of Technology in Counseling and Career Development (Tech Center) The Florida State University (FSU) Career Center and the FSU Learning Systems Institute (LSI) was created effective January 2021-January 2023. This partnership was formalized due to increased grant consultations associated with developing or enhancing university career centers at the international level. The increased attention to supporting international career centers is due to factors chronicled in the above trends. The MOU states:

> "The Cognitive Information Processing (CIP) Theory created at FSU has and will continue to be the theoretical underpinning for developing and enhancing international university career centers. This will provide opportunities to continue research activities on international applications of CIP Theory while advancing the international research base in career services."

As a result, the MOU ensures the future application of CIP theory through international career center consultation at the Florida State University.

Research Considerations

Theory, research, and practice intersect and inform each other in a synergistic way (Sampson, 2017). As highlighted in this chapter, CIP theory has been applied and found useful in several international settings (Osborn, 2020). A next step is to more formally examine CIP constructs with diverse individuals who seek services, to better understand how the validity of CIP constructs in certain settings and how they might be related to other career constructs within a particular career services organization. While we believe the main constructs are broad enough to find usefulness across cultures (e.g., "dysfunctional career thoughts" applies regardless of what specific thoughts are occurring), understanding the context of a country's culture will likely provide practitioners with more helpful intervention points. For example, in Uganda, Nsubuga and Ivins (2020) identified one such belief, i.e., that being hired is almost entirely dependent upon whom a person knows. When someone strongly endorses this belief, lower self-efficacy and personal agency was reported. Thus, identifying and understanding specific career beliefs that might not be included on the CTI could help inform practice in a particular setting. In this case, exploring the reliability and validity of the CTI in this country, and how it impacts other career constructs such as career indecision, would be recommended.

NCDA (2015) provides ethical standards and minimal career development competencies (2009) that can guide application of career theory and interventions, and thus, research, in international settings. Essentially, these considerations stress the importance of sensitivity, humility, respect, consultation, feedback, and evaluation when it comes to the international application of CIP theory. A practical recommendation for researchers is to collaborate with practitioners or researchers who are actively engaged with the population, from designing the research to publishing the findings. A second recommendation is for conducting formal program evaluations to provide effectiveness information.

Chapter 15 Summary

This chapter has addressed applications of cognitive information processing (CIP) theory at the international level. The advantages of applying CIP theory in developing or enhancing international career interventions were discussed including a) efficiency and cost effectiveness, b) practicality and emphasis on a theory to practice model, and c) detail in offering steps and tools for implementation. Also, cultural considerations associated with the international application of any career development theory including CIP were examined. The extensive international applications of CIP theory were chronicled ranging from an international teleconference conducted shortly after the development of CIP theory as well as its early use in Northern Ireland through creation of one-stop career centers. Application of CIP theory in supporting the national development of career centers through the Ministry of Education in the People's Republic of China was described. Additionally, several other countries that have applied CIP theory in creating or enhancing career centers were reviewed. More recent international applications of CIP theory were noted including projects in the Philippines and Lebanon. Emerging trends in the focus on developing university career centers based upon CIP theory through USAID grants in developing countries was also discussed.

Getting the Most Benefit from Reading Chapter 15

To effectively learn the material in this Chapter, complete one or more of the following activities:

- Compare and contrast CIP theory with other career development theories that hold potential for use internationally.

- Consider your own international travel experiences and how CIP theory might be used in those cultures and countries.

- When meeting with professional visitors from other cultures and counties, discuss CIP theory and how it might be applied in their schools and institutions.

- Visit the Center for the Study of Technology in Counseling and Career Development (Tech Center) website to learn more about CIP theory resources that could be applicable internationally.

- Visit the International Association for Educational and Vocational Guidance (IAEVG) IAEVG - Competencies to learn more about the organization and international competencies for practitioners.

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CHAPTER 16
DEVELOPING A CAREER SERVICES PROGRAM[65]

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This chapter explores the multiple roles of the career practitioner (CP) in delivering services to persons with differing needs. The chapter also examines the delivery of career services from a systems perspective, incorporating CIP theory and instructional systems design. After reviewing this chapter, the reader should be able to (a) understand the varied strategies that career practitioners can use to help individuals advance their career problem-solving and decision-making skills, (b) relate client needs to the level of complexity of career interventions

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and the level of practitioner and staff competence to meet those needs, (c) understand some basic concepts of social systems, and (d) apply the principles of instructional systems design (ISD) to the design and development of career guidance programs. The chapter begins with an examination of the multiple roles of career practitioners in service delivery and continues with a discussion of the scope of the problem, related policy issues, a systems approach to program development, applying CIP theory to career program design, instructional systems design, and an ISD model for career interventions. The chapter concludes with a chapter summary and recommendations for getting the most benefit from reading the chapter.

Multiple Roles of the Career Practitioner in Service Delivery

As individuals solve career problems and make career decisions, they are often faced with a vast and bewildering amount of information about the world of work, including facts and data about training requirements, supply-demand ratios, and salaries. They must also consider facts and data about themselves, such as their interests, goals, values, needs, abilities, skills, and employment preferences. Given the potentially overwhelming amounts of career and personal information available, what can practitioners, including career counselors, career advisors, or career coaches, do to present information in such a way that it can be used by individuals to enhance their career problem solving and decision-making?

All of us have an image of who a career practitioner (CP) is and what career counseling entails (Smith & Peterssen, 2023). One typical image is that of a counselor sitting in an office, face-to-face with a client, listening, talking, making helpful suggestions, being supportive, clarifying feelings, and exploring ideas. According to this image, a CP is someone who intervenes directly with people and who uses special communication skills and techniques to help individuals learn, grow, and become what they want to become.

But there are other images of career practice that emphasize less direct roles and activities. In an early view of these roles, Morrill et al. (1974) were among those who systematically addressed this issue with lists of other helping activities, including the following:

- Planning group guidance programs for special groups of students, teachers, parents, or alumni.

- Consulting with teachers or parents in their places of work or on the phone.

- Collecting and analyzing evaluation and research studies to learn more about the special career needs of persons in a particular organization or setting.

- Reviewing reports on the effectiveness of tests, computer-based career guidance systems, or programs that others have already developed and evaluated.

- Deciding which materials to purchase for a career center.

- Training and supervising paraprofessionals who also work with clients.

- Marketing and advertising career services to encourage potential clients to make use of them.

- Writing reports on the effectiveness of current programs or proposals for new career programs.

- Meeting with administrators, organizational decision makers, and other persons who can provide funds and resources to help develop and improve career programs.

- Visiting with employers to learn more about job markets.

The CP activities identified by Morrill et al. (1974), Sampson (2008), and Sampson and Lenz (2023) are intended to help clients make better career choices. The image of the practitioner's role that goes beyond the traditional one-on-one facilitative role is the focus of this chapter and those that follow.

Career practitioners can be helpful in many ways, both direct and indirect. Our experience is that the majority of clients seeking career assistance want easily accessible information about themselves and about the external world, e.g., occupations, education, jobs. Moreover, many clients can function quite well on their own with minimal direct career or personal counseling. Therefore, career practitioners must be able not only to attend to individual clients, but also to develop and manage career information services that allow for and even encourage independent self-exploration.

The Scope of the Problem

We will now change the focus for a moment. We have been thinking about clients making career choices and your role as a career practitioner in that process. But first, what about your own career? For those of you currently in school, think about the job ahead of you on completion of your training or continuing education. You may be employed in a school, a private business, a government or community agency, or a human resources department. What would you do and how would you feel if the following job assignments were given to you by your director?

- Review the career resources in our center, and purchase $4,000 worth of new print, audio/visual, or online materials within 10 days.

- Prepare a small-group employability skills program for below-average students who will graduate next month.

- Make a recommendation for purchasing the least expensive, most effective computer-assisted career guidance system for our school.

- Develop a plan for increasing the use of an expanded career resource center.

- Formulate a program to help undecided college sophomores choose a major field of study.

- Develop policies and procedures to implement virtual career services for clients that cannot present in person.

- Help Tara Jones decide which type of post-secondary education to pursue when she graduates from high school.

- Assist a woman who is recently divorced and has two small children find a job as soon as possible. She is 28, a high school graduate, and has very little work experience.

These assignments address an organization's obligation to provide career assistance. The managers and program directors who assign tasks such as these are really defining the goals of

the career services center and the range of career interventions it ought to provide. You, as a practitioner, will take increasing responsibility for identifying and carrying out these career services goals in response to both individual and organizational needs.

However, besides thinking about your own career behavior, what about the needs of the clients you seek to help? One comprehensive career center compiled a list of 50 typical career questions or concerns. The list is shown in Table 16.1. Read it carefully. Each of these questions or concerns could include numerous sub-questions or problems. In some cases, the need for information must be inferred. But each of these items, and hundreds more, can be positively addressed by a comprehensive career services program. Such client questions and concerns are the essence of career practice—there are no easy ways out for you as a CP, no ways to ignore these client statements of need—and they represent the basic starting point in career problem solving. Designing the career services delivery system that will enable practitioners to respond fully to such client questions and concerns is a focus of this chapter.

Table 16.1

Fifty Typical Career Questions or Concerns

Typical Career Questions or Concerns

1. I'm thinking about majoring in psychology. What can I do when I finish school?

2. I want to make a career change, but I'm not sure about what kind of discrimination I will face because I'm almost 55. I think I need to pick something that's really in demand. What would that be?

3. I'm trying to find information on a career as a behavioral specialist.

4. I may not be admitted to the nursing school, but I still want to be a nurse. What can I do?

5. I want to find a summer job on a cruise ship. Do you have a list of email addresses?

6. I was told you could give me an interest test. Can I take one now?

7. I'd like to get a job with an oil company overseas. How do I get into such a position?

8. I've been working as an administrative assistant for the state of Florida for 13 years, and I'm tired of it.

9. I want to use a computer to find out what my skills are.

10. My grade point average is 2.6. Can I still major in public relations?

11. I'm good in math and like finance but am wondering if engineering would be more challenging.

12. I'm not sure which area of business to go into. Can you help me?

13. I'm going to attend law school. Do you have anything that tells students what law students should take in college? Where can I find a listing of law schools and their admission requirements?

Typical Career Questions or Concerns

14. I have a job interview next week. Do you have some materials that can help me prepare?

15. I'm not doing too well in school, and I'm thinking about going to work.

16. I'm really unsure about what to major in. Can you help me?

17. I would like to locate a resource that lists cost, entrance requirements, and addresses for graduate programs in environmental policy.

18. How do I go about getting a job in state government? Is there anything special that I need to know?

19. I'm thinking of majoring in modern languages. What would be a good minor or second major?

20. What salary can I expect to make with a major in information studies?

21. I would like to find out about job opportunities in the Atlanta area. Can you help me?

22. I really like working with people, but I really want to make a good salary.

23. How much can I expect to earn working for the federal government?

24. Do you have a list of Internet sites where I can find criminology jobs?

25. I really enjoy my interior design class, but how can I tell if it's the right major for me?

26. What majors get the most job offers these days?

27. I'm majoring in social work. Can you help me find some employers?

28. My adviser told me you could test me to determine my aptitudes.

29. How does one go about getting information on the cinematography business—both production and direction—and other related careers?

30. What's the best way to have my resume reproduced? I need to write one.

31. I need to declare my major this week. I've been thinking of psychology or accounting.

32. What courses should I take for a career in oceanography? Also, who can I talk to about careers in oceanography?

33. I thought I was going to major in accounting, but I'm not doing well in my class. Can you tell me if I have the potential to succeed?

34. What services do you provide for FSU students or alumni who are job hunting?

35. I'm thinking of getting an MBA. What universities in Georgia have a program?

36. I'm not satisfied with my present job.

37. I'd like to study in France. Do you have any information?

38. I know what I want to do—physical therapy—but how do I find out what to major in to do it?

Typical Career Questions or Concerns

39. My family thinks I should major in computer science, but I hate math. Is there something I can do to please them and me?

40. I'm trying to find a communications internship in New York. Are there directories or websites with this information?

41. As an international student getting ready to graduate, I'm not sure how to proceed regarding the job search.

42. Where can I access a federal job application?

43. I took this test to help me choose my major, but it didn't help. I'm more confused than ever.

44. Can you help me find websites where I can post my resume?

45. I can't pursue my first choice of a major, engineering, because of my learning disability. I'm not sure what else to consider.

46. I'm a Ph.D. student in chemistry and need to write a CV. Do you have any examples or information I could look at?

47. I'm thinking about majoring in English, advertising, or public relations but want to take one of those career tests to see which one might be best.

48. I've heard you have a database of jobs—can you find me one in South Carolina in sales?

49. I received a job offer but would like to negotiate for a higher salary. What should I say?

50. I don't want to be a doctor or a nurse. Are there other health careers that I can enter? How many years of college do I need for these careers?

There is one more point to be made about the scope of the problem. A career center can be flooded with product advertisements, catalogs, flyers, and other printed or virtual announcements of new or revised career programs, products, or materials from various sources. These give a somewhat cloudy picture of the state of the art in this field. Moreover, a comprehensive career course in a community college or university may contain 50 to 75 different career learning activities, such as conducting job interviews or taking interest inventories. All of these materials and activities are designed to assist clients in developing information that will help them solve career problems and make better career decisions. Therefore, the problem may be reframed as a question: "What can I do as a prospective counselor or practitioner to help individuals, with diverse needs and motivations, to use appropriate information in a timely and efficient manner to enhance their career problem-solving and decision-making skills?"

Thus far, we have indicated that (a) career practitioners can be and are helpful in many ways in addition to direct one-to-one counseling; (b) organizations and individuals have diverse yet specific, pressing needs for career assistance, especially information; and (c) the range and number of potential career interventions and available products are vast. Nevertheless, the first task in developing responsive services, before proceeding with the design of a comprehensive

career development program, is to become aware of organizational, philosophical, or policy issues. The second task is to learn how to use a systems approach to design an effective and efficient career services program in light of these policies. Practitioners have an important stake in the development of policies that will enable them to function as effective, helpful professionals and to meet their own life and career goals.

Policy Issues

The method that organizations sometimes use to develop the goals and plans to manage their affairs may be called policy analysis (Quade, 1977). It is typically not a familiar topic to most career practitioners. It is a matter of politics, pressure, criticism, conflict, and compromise. But the development of policy represents the molding of idealized values or goals and the reality of practical limits and constraints. It is not possible to meet everyone's needs, to be completely helpful, or to have all of the necessary resources. There are almost always limitations in the availability of trained staff, physical space, funds to meet expenses, and the knowledge of what intervention might be effective and helpful. Therefore, choices have to be made and priorities must be set—not everything that is needed or that could be done will be done.

Figure 16.1

Synthesis of Three Guidance Dimensions: Client Needs, Intervention Complexity, and Staff Competencies
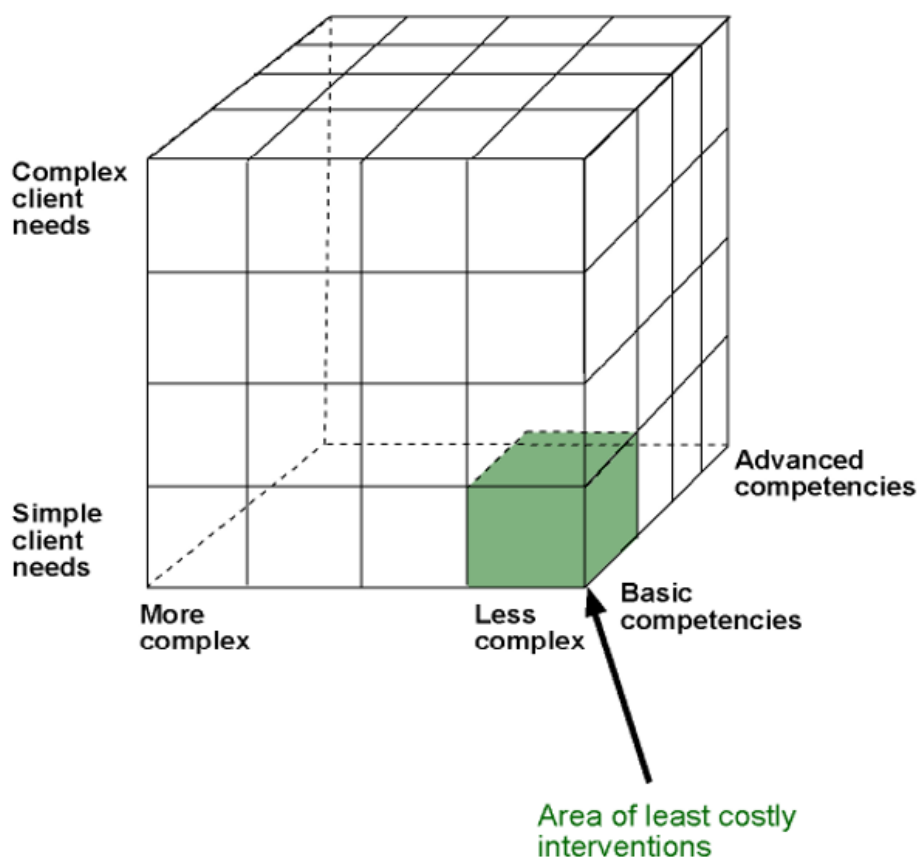
Figure 16.1 shows a three-dimensional cube that will help you grasp some of the policy issues inherent in designing career development programs. The three dimensions—level of client needs, level of career intervention complexity, and level of staff competencies—relate to one another in various ways. Note that each dimension presents a continuum: from simple to complex client needs, from less to more career intervention complexity, and from basic to advanced staff competencies. The shaded part of the cube is the functional area characterized by the simplest client needs, the least complex interventions, and the most basic staff competencies. This is the point of lowest cost for interventions in terms of staff time and resources to meet the client's need for information.

The continuum for each of the three dimensions is described next, in order to point out how the cube may be used to guide program planning and policy development.

Level of Client Needs

Client needs for career assistance can be complex and varied. Chapter 4 provided a description of a four-quadrant readiness model for assessing client needs in relation to self-help, brief staff-assisted, and individual case-managed career services.

In general, young people tend to have simpler career needs; adults may have more complex career situations, including both a greater number and a greater range of needs. A comprehensive career guidance program serving young people and adults should be able to respond to all levels of needs. Complex needs may have multiple causes in addition to the presenting problem, including environmental factors and mental health issues.

Level of Career Intervention Complexity

The state of the art in the area of career interventions is also complex and varied. In general, the more complex the intervention, the more specialized the career practitioner must become, e.g., licensure, certifications. The level of non-practitioner-mediated interventions can also increase in complexity—for example, the use of multiple print and online media, specialized referral resources, and interventions of longer duration. Less complex interventions generally are less costly, are of shorter duration, and may be delivered with the assistance of less experienced and less trained staff members, e.g., paraprofessionals (Lenz & Panke, 2001).

Level of Staff Competencies

Career development associations, state government agencies, and individuals have specified various competencies needed by teachers, parents, and practitioners to deliver career services. The National Career Development Association (NCDA) has developed credentialing programs for career practitioners with varied levels of skills and competencies (https://www.ncda.org/aws/NCDA/pt/sp/credentialing_commission). There are six branches of credentialing, each with its own path for boosting professional growth and recognition. Career practitioners can explore this comprehensive site for exact application requirements, details, videos, and a community that can provide support.

Given this continuum of staff competencies, it is obvious that differentiated staffing arrangements, and both direct and indirect practitioner interventions, are required to address the wide range of needs that clients may bring to a career services program. This model underscores the fact that individual counseling may be a highly specialized function that may not be required

for many career interventions. Paraprofessionals have long occupied a key role in the offering of career interventions (Lenz & Panke, 2001). Simple client needs, which require less complex interventions, may not require direct or intensive counselor attention. However, the design of comprehensive career service programs requires the professional judgment and input of highly trained practitioners.

The cube shown in Figure 16.1 provides a way to describe program activities, to set goals, to choose alternative interventions, and to allocate resources—that is, to develop policy. Policy development shapes the direction, scope, and level of career service programs and can help address the following familiar issues.

- When should career interventions be offered to clients? At the point of first contact to all clients in order to prevent later problems, or to a limited number of clients with special needs?

- Where should the emphasis in interventions be? On the remedying of chronic problems or on the general, primary prevention of problems?

- Who are the primary clients? Who is entitled to be served? Is everyone entitled to be helped? Or only a few people? Freshmen through seniors? Adults from the community?

- How will human and nonhuman resources be allocated? How much staff time and funding should be spent on different kinds of interventions? Should groups, classes, or individual conferences be used? Should a fee be charged? How should services be funded? Should the intervention include paraprofessionals, professionals, self-help print materials, or online resources? Are space and other facilities available?

- Why will the programs be offered? Who are the stakeholders? Individual clients? The organization? Or ourselves as practitioners?

- What are the desired goals? What are the benefits in comparison to the costs? How are the goals identified?

Engaging with these policy issues involves coming to terms with one's personal and professional values. Knowing one's values and being able to act consistently and systematically on the basis of those values is the mark of a successful career services practitioner. Referring again to the cube in Figure 16.1, can you begin to assess how your professional goals and personal values match with different kinds of career service interventions and their required practitioner competencies? For example, you might decide that prevention of career problems is more important than treating them later and that you want to devote your efforts to programs that stop or prevent career problems from ever occurring in the first place (Romano & Hage, 2000).

A Systems Approach to Program Development

From the very earliest days of the vocational guidance movement in the early 1900s, program development has been the hallmark of the profession (Parsons, 1909; Stephens, 1970). Frank Parsons, a social reformer, educator, lawyer, prominent Boston citizen, and the father of vocational guidance, is considered an exemplary program developer, even by today's standards. In *Choosing a Vocation*, Parsons described in detail his work in creating the Boston Vocations Bureau (we would call it a career center today) in the Civic Service House (a settlement house that today we would probably call a neighborhood community center).

One is struck by the ways in which Parsons was sensitive to the education, training, employment, and career needs of Boston youth and other citizens. American cities at the turn of the 20th century often contained areas populated with southern European immigrants who did not speak English, had little training for industrial work, and were unfamiliar with American citizenship responsibilities (Stephens, 1970). There were powerful "robber barons" who controlled the new wealth from railroads, banks, and industry. Public education was under fire, and the high school drop-out rate was 90% in some cities (Parsons, 1909). Child labor and other social ills were being exposed by social reformers, journalists, and similar individuals. Vocational education to prepare citizens with skills and knowledge for the new jobs in industry was nonexistent. In this social context, Parsons developed his programs, and vocational guidance was born to help persons select and secure jobs. It is important to remember this context because many of these forces still exist in this nation and throughout the world, and they continue to influence the development of career guidance programs today. Persons interested in learning more about the conditions leading to the development of the career counseling profession may read Zytowski (2001), "Frank Parsons and the Progressive Movement." This article provides an excellent analysis of the social influences that influenced Parson's thinking and work in developing the Vocations Bureau.

Since the early 1970s, career guidance professionals have become increasingly aware of the importance of broad social and environmental factors in the development and operation of career service programs (Blustein et al., 2019; Hoyt, 1981; Sampson et al., 2011). O'Brien (2001) called attention to the legacy of social change inherent in the work of career counselors. She challenged career counselors and vocational psychologists to extend Parson's compassion and vision in ways that enhance people's lives and contribute to the creation of a more just society. Career service program developers and administrators are aware that career services operate within an organizational and social system. A systems approach undergirds the strategies for the development of beneficial career services programs.

Important Systems Concepts

In this subsection, we first examine some of the basic concepts of a systems approach; later, the focus is on a particular application of the systems approach drawn from instructional systems design (ISD) in educational psychology, which has special relevance for the development of career services programs.

Although we frequently use the term *program* in casual and professional discussions, it is important to spend a few moments defining this term. As we have already established, career interventions can cover a wide variety of activities, from career counseling to career education, and from career information to organizational career development. Patton and McMahon (2001) explored matters related to the definition of *career programs*, and we will borrow from their work. For our purposes, a career program contains goals and objectives and includes a planned sequence of learning experiences in education, training, and other settings designed to develop knowledge, skills, and attitudes that assist persons in making informed decisions about study and/or work options for effective participation in working life.

Social System

A *social system* may be defined as a structure or organization of an orderly whole, showing the interrelationships of the parts to each other and to the whole (Bertalanffy, 1968). An

example of a social system could be a high school guidance department composed of a director, six counselors, three secretaries, three student assistants, and five volunteers. A system may be further described as the parts (the staff and helpers) working interdependently, as well as interactively, to accomplish something. The purpose of the system (in this case, a guidance department) is to achieve previously specified performance goals. Thus, a social system can be characterized as (a) a structure or organization, (b) forming an orderly whole, (c) with parts working interdependently, (d) with parts working interactively, (e) the parts being related to the whole, and (f) with an intent to achieve previously specified performance goals.

Objectives

Applying the concept of a social system to the development of career guidance programs, a systems approach leads to several additional concepts (Hosford & Ryan, 1970). The system outputs of guidance programs can be described in terms of *behavioral objectives*. This means that the product or output of the system (the guidance program) is defined in terms of observable behaviors or performances.

The following are examples of program outcome objectives:

- A career resource center will be established for teacher, staff, and student use.

- A new part-time administrative assistant will be employed in the career guidance department within 12 months.

The following are examples of behavioral objectives:

- After completing a career values card sort, the client can name the three values that are most important to their career planning.

- An employee will be able to identify three sources of career information to learn more about jobs appearing on their employer's website.

A learner-oriented behavioral objective addresses the question "As a result of participating in this guidance program, what measurable behaviors should the individual be able to perform?" Through such objectives, we seek to describe new capabilities that will ultimately help clients become better problem solvers and decision makers.

Analysis and Synthesis

Analysis is breaking down the whole into its parts and making explicit the relationships of the parts to one another and to the whole. In analysis, the components of a system are studied and evaluated to identify the causes of performance gaps. A problem, whether an individual's or a program's, is defined in terms of a gap between an existing level of performance and the desired level. In analysis, we seek to identify components and their interrelationships that interfere with the desirable level of operation of the system (for example, the guidance program). In *synthesis*, the component parts are added, modified, combined, or reconfigured into new relationships so that a new system or unit is created. Analysis and synthesis should be conducted in a scientific, disciplined, methodologically sound way, and not by guesswork or trial and error.

Feedback

Information about the output of the system that is incorporated back into the system is referred to as *feedback*. The feedback loop assures that information about the worth or value of the system outputs is channeled back into the system so that continual system changes and improvements can be made. Feedback assures constant monitoring of the performance of the system.

Flowchart

A *flowchart* is a diagram that shows the inputs, the component parts, and the way they interrelate; it shows how information about outputs is looped back into the system; and it shows the system's relationship to the larger environment. Figure 16.2 depicts a simple flowchart of a career intervention. In this example, a student sought help with the following question: "What do astrogeophysicists do?"

Figure 16.2

Career Intervention Flowchart
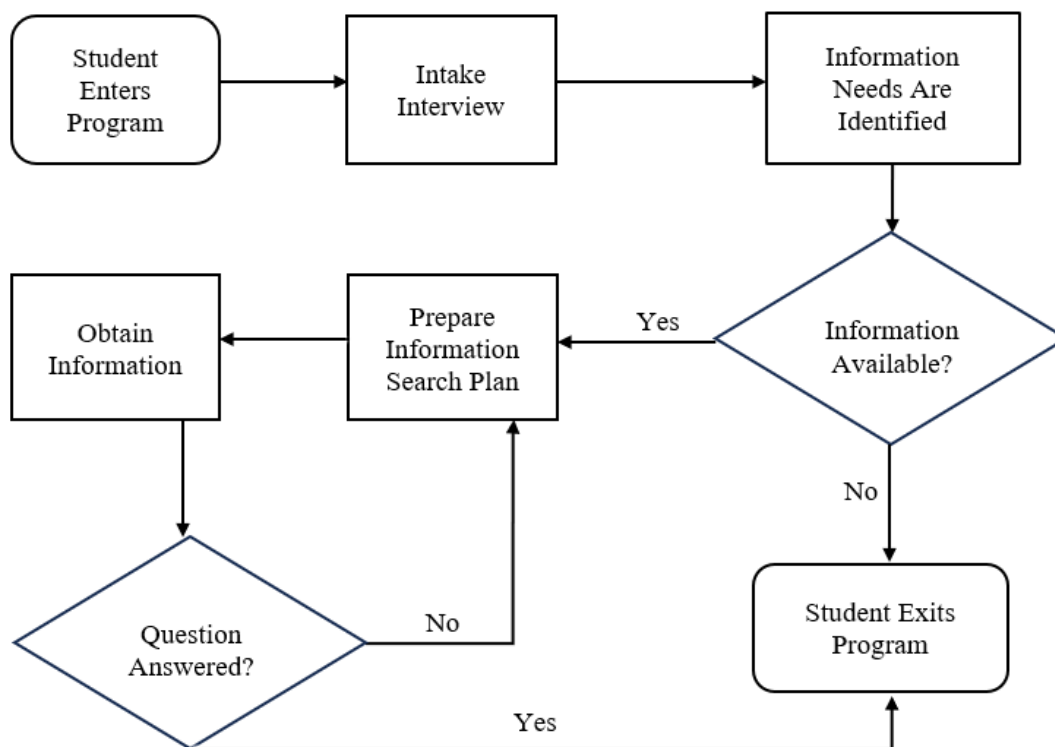
Open Versus Closed Systems

Much of our thinking about general systems theory comes from the work of Ludwig von Bertalanffy (1968), a theoretical biologist. He observed that an *open system*, or living system, constantly interacts with its environment. For example, a single-cell protozoan with its permeable membrane constantly draws nutrients from the surrounding water and gives off waste. A *closed system*, on the other hand, such as a piece of steel, does not have this relationship with

the environment that would permit it to grow and change. The steel is said to be in a state of entropy—that is, tending toward a static, steady state of equilibrium, or toward gradual disorder. The protozoan, on the other hand, is in a state of negative entropy as long as it maintains its positive interaction with its environment. The protozoan, as a living, growing organism, tends toward higher degrees of order. Social systems, such as persons, families, guidance departments, schools, and even nations, can also be characterized as open systems so long as they engage in positive, growing, interactive relationships with their environments.

Figure 16.3 shows a simple flowchart of a social system. The system exists and functions in a wider environment; for example, a career guidance department functions in an environment that includes the school, the community, and even the state and the nation. The environment also includes the history, policies, and mission of the school; the teachers, administration, and parents and their views of the department; the physical plant and the tax base of the community and state; the state and national laws pertaining to education; and the state of the art in guidance interventions—all that we know about how to operate effective guidance programs. The career guidance program constantly interacts with this environment.

Figure 16.3

Social System Flowchart
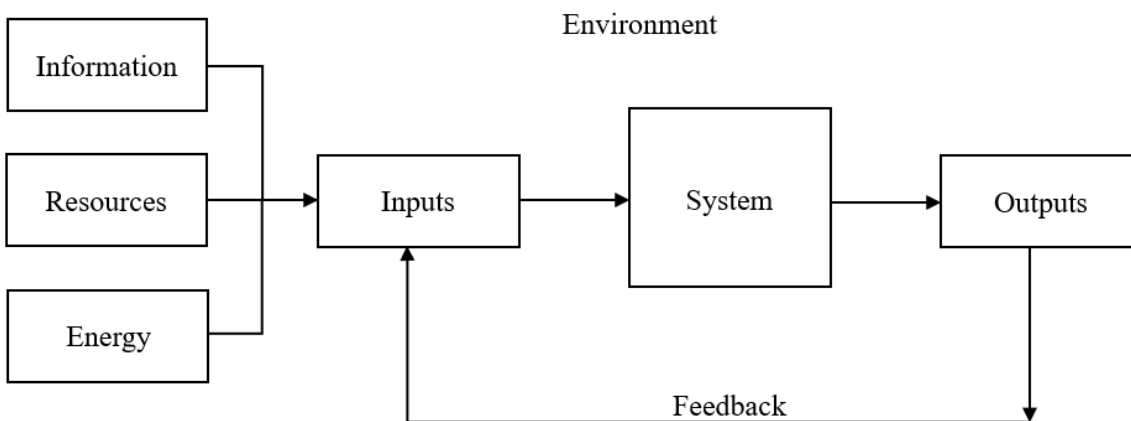
A complex array of information from the environment is screened, analyzed, and fed into the system in the form of inputs. For example, information from the environment could include reports of student needs or school priorities, such as to reduce the drop-out rate or to comply with new state laws or school board policies affecting guidance; or it could include information about new, effective career interventions. Inputs involving resources could include budget allocations, changes in office space or facilities, or the departure or arrival of new staff members. Energy inputs in guidance service might include everything from the motivation the superintendent has instilled, to the electricity necessary to light the building or to run a computer.

Control Functions

The outputs of the system are constantly monitored and evaluated. Information is fed back to the system in a feedback loop, which serves a *control function*, helping to determine whether the system should grow, shrink, or remain the same. As with a protozoan, the guidance program will counteract the forces of entropy and remain an open system so long as it engages in

meaningful, productive interaction with its environment. If the program fails in this function, it will become a closed system—which may lead to the guidance department being shut down.

Hierarchy

An additional comment can be added about the guidance system in relation to other systems. As the primary system, it conducts meetings; provides services to many kinds of clients, including students, families, teachers, and administrators; possesses a structure (which may be represented in an organizational chart); maintains a schedule and calendar of activities; trains new staff and supervises other staff; and performs public relations activities to inform various groups in the environment about the services it offers. The guidance department is actually part of a larger system, the school; the school is part of an even larger system, the local school district; and so forth. These larger systems encompassing the guidance department are called suprasystems; subordinate systems are called subsystems. Any primary system, i.e., the system of interest or observation, exists within a *hierarchy* of subsystems and suprasystems. An example of a subsystem in a guidance department might consist of the director and one of the counselors, who collaborate to produce reports on the use of career materials within the guidance department. The suprasystem may be a broader system of student services that might include health services, registrar, etc.

Figure 16.4

The CASVE Process of Program Development
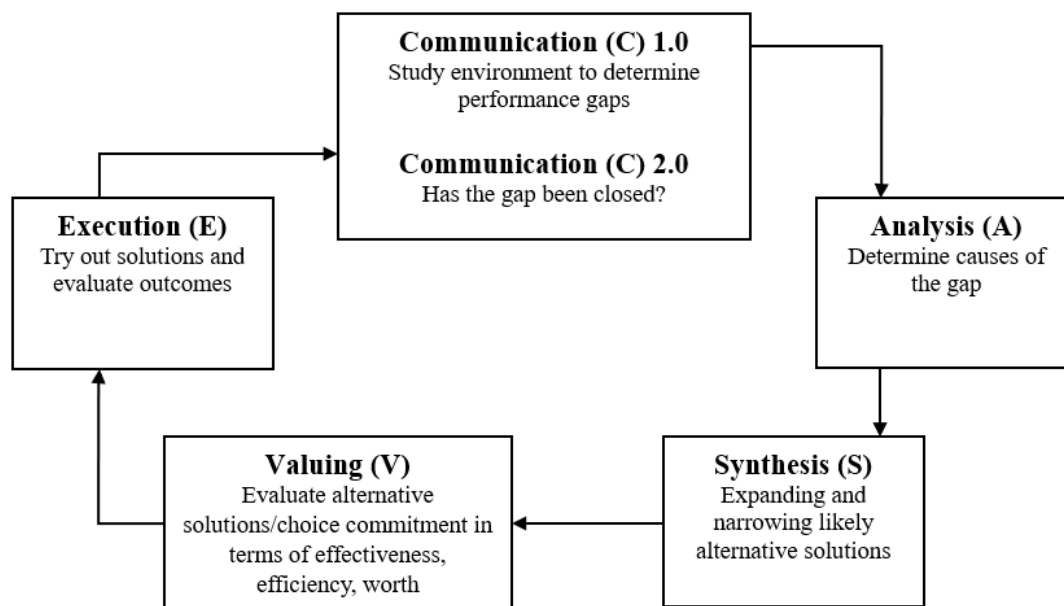
Applying CIP Theory to Career Program Design

The systems concepts that have been introduced thus far are intended to help practitioners approach the task of designing effective career interventions in a more effective and orderly way. According to Sampson (2008) and Vaupel (1977), this approach results in better plans and

decisions than habit or linear or A + B + C approaches, a common method of program development.

The flowchart shown in Figure 16.4 shows six steps, which are analogous to the phases of the CASVE decision-making cycle discussed earlier. The components of CIP theory's pyramid and CASVE cycle can be used to guide practitioners in designing effective career programs (Sampson et al., 2020). By using this CIP theory-based framework, practitioners are more likely to be aware of the key issues involved in successful program development.

Peterson et al. (1991) provided an early discussion of CIP theory in relation to program development. Another example of applying CIP theory to program development is provided in Reardon and Lenz (2015) and Sampson and Lenz (2023). In Reardon and Lenz (2014), CIP theory is applied to the development of a middle school career assessment program. The remainder of this chapter provides an update to these earlier descriptions, reflecting advancements in CIP theory and research, and uses the redesign of a university-based career services center to accommodate adult distance learners as a means of illustrating the application of CIP theory to career program design. Some of the material in this chapter reflects earlier work by Lenz et al. (2001).

Self- and Options Knowledge

As noted earlier, the base of CIP theory's pyramid focuses on self-knowledge and knowledge of options. These concepts can be applied to organizations and programs because they also have a sense of identity. Self-knowledge may include the organization's self-perceptions in terms of its history and values, its view of its mission and goals, and its sense of organizational culture. Organizations and programs may reflect the values of their leaders by what activities they deem important, what services they emphasize, and where they concentrate their staff time and resources. What principles guide the organization? Organizations or programs may be known for doing certain things well or they may have certain strengths, e.g., they are known as providers of quality instruction. Organizations may get a sense of satisfaction from the services or programs they deliver—for example, they may help unemployed adults receive retraining and return to gainful employment.

In addition to self-knowledge, program planning and design requires the consideration of organizational knowledge related to options available to solve problems in the present. The programs and services pursued at an earlier time by the organization may need to be revised in light of internal or external forces that now impact the organization as described in Chapter 17. Part of the program design and development process may involve reconsidering the organization's role and purpose and the options available for carrying out this purpose or for a newly identified purpose. We will elaborate on this more when we review the steps in the CASVE cycle, which require the consideration of self-knowledge and option knowledge from an organizational or programmatic perspective.

CASVE Cycle

Each CASVE cycle phase raises key issues and topics that program developers must consider. In this section, we discuss each phase of the CASVE cycle with reference to a gap in career service delivery for adult distance learners. The readers of this chapter may wish to reframe the questions and issues to reflect the particular setting and population of interest to them.

Communication

The need for an innovation or change in program service delivery derives from several possible situations, each of which involves a need to remove the gap between the present situation and a more ideal situation. The gap may have been identified by a higher-level administrator in the organization, by an internal or external task force, by the collective wisdom of the current staff, or by the felt need of one individual. The agency or organization may have also received feedback from the users of its services, either formally or informally. Whatever the source of this feedback, it typically reflects a desire to improve the current situation. There is often both written information, or in some cases, "hard data," and a certain level of emotion, energy, and motivation to make things better to reduce the gap between the real and the ideal (Reardon & Lenz, 2015).

There are limited data on the nature of the national career services gaps in the US. However, an earlier example is a national poll commissioned by NCDA and conducted by the Harris Interactive Company in 2011. This phone survey was conducted with 1,000 adults, 18 years of age or older. The sample was comprised of 49% males and 51% females. The survey examined adults' attitudes and experience related to work and the selection of a career or job. Only one quarter (24%) of adults reported that they had already visited a career practitioner and 86% of them found it to be helpful. Only 37% of respondents reported making a conscious choice when choosing a career while over half (56%) took the only job available, looked interesting at the time, or was based on the influence of parents/relatives or friends.

The 2011 survey data suggested that more adults could benefit from working with a career practitioner. Sizeable numbers reported needing career help and had visited with a career practitioner. Twenty-one percent (21%) of adults in the labor force reported needing help in making career plans, selecting, changing, or getting a job. A more recent Harris survey (NCDA, 2021), commissioned by NCDA to assess the perceptions of working Americans during the pandemic, reported that the services offered by career practitioners were more essential than ever.

How might a program developer seek to understand the gap in career services? The following example illustrates a process. A university career services center at a large public university in the southeast found itself using a more traditional service delivery model that was not providing an optimum level of service to all constituents. The career office had for many years geared its services to more traditional-aged students, and the emphasis had been primarily on individual appointments. Many of the services had been provided in a face-to-face mode (e.g., career planning classes, workshops, individual counseling) and had been delivered during traditional work-week hours (i.e., 8 to 5).

In recent years, this university had seen a significant increase in the enrollment of adult distance learners. The average age of students had increased from 20 to 28. The career center had recently hired a staff person with experience in a setting where they had benefited from distance-learning programs, and they had also held an assistantship as a graduate student in an office that was designed to address the needs of adult learners. In addition, the university's provost and president had allocated new resources for and placed a new emphasis on the delivery of distance learning.

This brief scenario highlights some possible key internal and external cues that signify the existence in the Communication phase of a gap related to organizational effectiveness. With

the input of the new staff member, the career center began to raise questions about the extent to which it was meeting the needs of new student populations, particularly adult distance learners. At this point, it became essential that an individual or a group of concerned persons assume a leadership role in the program design and development process. Reardon and Lenz (2015) outlined some questions that may be useful for career services administrators and practitioners to consider in program planning in order to understand the nature of the gap:

1. Is it reasonable to assume that the gap can be removed? Is this task worth undertaking?

2. What is the history of the gap in this setting? How long has it existed?

3. Does this gap exist in other places? What has been done in other places to remove the gap?

4. Who in the organization or community is concerned about the gap?

5. How do various stakeholders feel about the gap? How badly do they want it removed?

6. What data are available (e.g., survey results, internal reports, accountability studies) that provide specific information about the nature and extent of the gap?

7. What is the cost to remove the gap vs. the cost to leave it?

The information gathered in the process of addressing these questions, along with additional external and internal cues, provides the content that is considered in the Analysis phase of this program development model.

Analysis

The Analysis phase of the CASVE cycle involves considering all of the causal elements and circumstances that led to the creation of the gap, along with determining the relationships between the gap and possible solutions. Analysis involves combining organizational self-knowledge (e.g., records, institutional memory) with options knowledge (known alternatives to address the problem). Whether in individual career decision-making or organizational program planning, there is too often a rush to the Synthesis and Execution phases without careful consideration of all the relevant information and conditions that led to the gap. A leap from Communication to Synthesis phases can result in trial-and-error solutions to the problem. It is a "quick fix" to the problem that is sought in this instance rather than careful reasoning and a deliberate use of a sound program-planning model. These quick-fix approaches ignore the key aspects of strategic planning, which involve both doing the "right things" and "doing things right" (See Chapter 20). As Peterson et al. (1991) noted: "Good problem solvers and decision makers resist the pressure to act impulsively; instead, they engage in a period of thoughtful reflection to gain a better understanding of the problem and of their ability to respond" (p. 34). This occurs in the Analysis phase of the CASVE cycle.

Using the previous seven questions as a guide, we will examine the types of information that a program developer in our college example might want to consider. The gap in service delivery identified by this career center is one that can be removed, or at least minimized to some degree. In an initial meeting with the staff, the center's director heard several ideas about how these concerns regarding distance learning and adult learners might be addressed. The gap in services was of relatively recent origin, but the pressure to address that gap had increased quickly. Other academic and student services offices were facing similar pressure from various

university administrators, policymakers, and vocal constituents. A key activity undertaken by the career center at this point involved meeting with other department heads in student services, as well as the chief student services person, to discuss possible solutions. The center's director was aware that top university officials considered the provision of services to nontraditional distance learners a high priority. The career center director also wanted to remove the gap in career services to adult learners. There had been a trend in university funding patterns toward the increasing allocation of resources to make services more accessible, both in terms of location and hours, and to move learning resources to a format suitable for distance learners. Legislative reports and student satisfaction surveys from adult learners also provided information on the nature of the gap. The Analysis phase emphasizes gathering as much information as possible about the nature of the problem. In the next section, we discuss the Synthesis phase of the CASVE cycle.

Synthesis

In the Synthesis phase, the question is asked: "What courses of action might solve the problem?" As Reardon and Lenz (2015) noted, the Synthesis phase asks program developers to specify solutions that have a high potential of removing the gap, synthesizing information obtained from Communication and Analysis phases to identify old and/or new resources and activities to remove gaps. Career center staff members may specify doing familiar tasks in similar or new ways, or creating completely new activities. As noted earlier, there are two aspects of the Synthesis phase: Synthesis Elaboration and Synthesis Crystallization.

The Synthesis-elaboration phase allows for divergent thinking, and no options are rejected out of hand; this allows for the widest possible consideration of alternatives. The program leader or task force working on removing a gap may solicit input in various ways, such as arranging open meetings or focus groups, consulting with colleagues individually, brainstorming, gathering information through internal or external listservs, or posting surveys electronically. A key point to keep in mind when engaging the Synthesis elaboration phase of program development is to carry forward what was learned from the previous phases—that is, Communication and Analysis. This helps the persons involved in program development stay focused on the needs of the individuals being served and the needs of the organization or agency (Reardon & Lenz, 2015).

In the Synthesis-crystallization phase, the program developer begins narrowing options by developing a written report, a planning document, or a proposal outlining the nature of the program interventions being contemplated. Unrealistic, impractical options are dismissed. This is a critical step in the program development process because it begins to formulate a strategy for action that can be read, contemplated, discussed, dissected, and criticized by various stakeholders. Quite literally, this written document "crystallizes" the thinking that has taken place earlier in the CASVE cycle.

Perhaps a task force or committee could be given the assignment to develop a specific program proposal for addressing the problem or need. It may involve one or more persons stepping forward and taking leadership in producing documents that move the process forward in the career center. Ultimately, this will lead to writing a document in the form of a need statement ("specifying the nature of the gap") or a program proposal. These need statements or gaps are translated into program goals, which may reflect both intervention process goals and learner outcome goals (Reardon & Lenz, 2015). Process goals could include the following: "Provide

access to Web-based career assessments for adult distance learners." Learner outcome goals might include this statement: "Noncampus-based learners will be able to develop effective resumes and cover letters by accessing Web-based career center workshops."

Goal statements of this nature outline how things will be different as a result of the introduction of a proposed career services program, how the gap identified in the Communication phase and elaborated in the Analysis phase of the CASVE cycle will be removed or reduced (Reardon & Lenz, 2015). Whereas the Analysis and Synthesis-elaboration phases allow for fairly wide-ranging discussion of information and options, the Synthesis-crystallization phase of the CASVE cycle begins to focus in a more concrete manner on specific options or alternatives that may be used to address the needs and goals identified in the Analysis phase.

Reardon and Lenz (2015) identified key questions to consider during this Synthesis-crystallization phase of program planning. Raising these questions and focusing on possible answers in relation to our example problem of career services to adult distance learners may help in the evaluation and elimination of potential options for the program intervention being contemplated to remove the gap. The ultimate question is whether the program development proposal addresses the causes of the gap identified in the Analysis phase.

1. How might staff roles change as services to adult distance learners are increased? Will an existing job description be rewritten to staff this new programmatic effort, or will no changes be needed?

2. Are procedures explained regarding staff selection and training? Does everyone need to be trained? Do different types of staff receive different types of training? Can some staff opt out of the program? What do staff need to understand about the needs of the population being served (e.g., adult learners)? What information will be communicated by staff to these individuals when they call the career center requesting specific services or information?

3. What space and equipment will be needed for the program, if any? Will other service delivery locations, such as a university library or student union, be created on campus? Will there be extended phone, virtual, or in-person service hours to meet the needs of those being served?

4. What resources (e.g., technology, funds, staff) are available to remove the gap? Are these resources readily available on site or do they have to be obtained elsewhere?

5. How will the program be introduced to staff and clients? Will descriptions of these services be included in current publications? Will there be a special section of the career center's website devoted to these adult learners?

6. How will the proposed program be supervised and managed on a daily basis? Is there one designated contact person who will be responsible, or are some or all staff cross-trained in order to provide services to new populations being served?

7. What are the daily, weekly, monthly, and quarterly time frames for program operation? Will it operate during breaks and holidays? In the evenings or weekends?

8. What are the human and nonhuman costs associated with the program? What consultation, technical assistance, and human resources support does the proposed program need? How will these costs be paid, or how will these resources be acquired? Will additional staff be paid to work in the evenings and on weekends? Will funds be provided to hire technical personnel to redesign the center's website with new populations in mind?

9. How will the proposed program change the current procedures and related programs in the career center? Will some other program be eliminated or curtailed if this new program is added?

10. How will the program be evaluated? What special forms and materials, if any, will be needed to evaluate the program? Who will do this? When will they do it? How will clients and staff provide feedback regarding their experiences with the changes in service delivery resulting from implementation of the program?

11. Will the information collected by the program and in the evaluation process enable the staff to determine if the original gaps identified in the Communication phase have been removed or reduced?

12. How and when will information about the success of the program be shared with others in the organization, e.g., potential future clients, staff, top administrators? In the larger community? In the profession, e.g., journal articles, conference presentations?

This list of questions specifies the kinds of information that a program developer might review during the Synthesis-crystallization phase of the CASVE cycle to arrive at viable options to address the gap. Work in this phase of program development requires staff to become quite specific regarding who will be involved in the program, when they will be doing things, how they will be operating, what they will be doing, and why they will be doing it. Addressing these questions in the program proposal means that the program will more likely operate smoothly when introduced and more likely be effective. If these questions are not addressed in the proposal before actual program operations begin, it is likely that staff confusion and resistance will result in an unsuccessful program (Sampson & Lenz, 2023). This latter point cannot be overemphasized. Our experience as career practitioners includes "painful" memories of numerous examples of programs failing because of a lack of careful planning.

Valuing

In the Valuing phase of the CASVE cycle of program development, basic questions about the worth and merit of the proposed program are raised and answered. Issues related to questions 8 and 9 in the Synthesis-crystallization phase are especially relevant in the Valuing phase. The basic issue in this phase boils down to this question: "Is this proposed program worth doing, given the costs?" A positive response from key persons affected by the proposed program, including the career center's supervisory and support staff, the individuals being served, and higher-level administrators, means that the organization wishes to make a commitment to establishing the program that has been proposed either by the program planning task force or the agency head.

Each option identified in Synthesis crystallization should be evaluated in terms of (a) effectiveness (b) efficiency in terms of cost and resources used, and (c) worth in terms of benefit to individuals, career services, university mission, and the community. In the case of our career

center example, we would hope that the decision to implement the proposed program of new services for adult learners involved in the distance education program was right for the career center, the university, all students, and the broader community. A positive response might mean any or all of the following:

- The philosophy of the proposed program is the right one.

- It is more important to do this proposed program than some other one.

- The costs are reasonable.

- The likely outcomes of the program are desirable.

- Most stakeholders favor the proposed program.

- The career center and university will be more effective in meeting overall goals as a result of implementation of the proposed program.

After considering all the questions and information gathered in the Synthesis phase, and after reflecting on the information obtained in the Communication and Analysis phases, the program planners and administrators in charge commit to a specific course of action that reflects a consensus about how to proceed and what option or options are likely to produce the desired results to remove the gap in career services to adult learners. However, any plan about how to proceed is only as effective as the means used to execute the program plan. The next section describes how the Execution phase of the CASVE cycle is applied in program development.

Execution

In the Execution phase of the CASVE cycle of program development, the organization or agency staff take action steps to implement the program plan or option specified in the Valuing phase. Issues related to questions in the Synthesis-crystallization phase are especially important to cover now in the Execution phase. This phase is often governed by a specific set of steps and timelines so that all individuals know what is likely to happen and by when. Key tasks are assigned to the individuals involved in program implementation. If a program development task force was formed, it may be dissolved at this point, unless it was given specific roles associated with the implementation process. For example, if the new services to adult distance learners are to be marketed, this task may revert to the center's marketing and communication manager or information specialist. If one person provided leadership throughout the program development process, that person might continue to provide leadership in directing the implementation of the program in the Execution phase of the CASVE cycle, as reflected by their revised position description. [See Sampson & Lenz (2023) for details on an 8-step implementation model for career interventions.]

Another key element of the Execution phase may be a limited tryout with a select group of clients to determine whether the procedures and resources actually work as expected (Reardon & Lenz, 2015) or other types of pilot tests (Sampson & Lenz, 2023). Going back to our example, one important group of distance learners at the university are persons completing degrees in information studies. The activities and services that came out of the program proposal could be pilot tested with this group. Their experiences and feedback would allow staff to collect information about program procedures and possibly return to an earlier phase of the CASVE cycle to potentially rethink and redesign some of the program activities. In some program

development and evaluation models, these kinds of activities are described as formative evaluation or process evaluation—that is, "Are we doing things right?"

Communication

Finally, a CIP theory-based approach to program development specifies returning to the CASVE cycle's Communication phase to determine if the gap specified earlier in career services to adult distance learners has been removed following the introduction of the new program. Issues related to questions noted earlier in the Synthesis-crystallization phase are important to review now in this Communication phase. Program evaluators are familiar with this general area as product evaluation or outcome evaluation--that is, "Are we doing the right things?" The list of original needs and goals specified in the Communication and Analysis phases is reexamined in light of data collected in the Execution phase to determine if the program is achieving worthwhile goals in a cost-effective way. If it is, then the program would likely be described as a successful career intervention, and our adult distance learners would be receiving services deemed desirable by the persons being served, the career center staff, the university administration, policymakers, and other constituents.

Executive Processing

In the previous sections, we examined how the base of the pyramid and the CASVE cycle could be applied to the process of program design and development. We noted in an earlier chapter that the executive processing component of CIP theory, with respect to individual career problem solving and decision-making, is concerned with how individuals think and feel about career choices or "thinking about thinking." This concept can also be applied to how individuals in organizations approach program design and development, especially when it involves a significant change in how things get done.

When approaching the design and delivery of new programs and services, the collective and individual thinking of staff can play a key role in how successful that process will be. Most readers are aware of how positive thinking contributes to the success of an individual or an organization. This might be reflected in statements such as "We can do this"; "We know what it takes to accomplish this task"; or "We're excited about this new challenge we're facing." In contrast, most of us have also experienced the impact of negative thinking within an organization, reflected in statements or questions such as "We've always done it this way"; "What if we try this, spend all this money, and it doesn't work?"; "Things are working well the way they are, so why change?"; or "That's not in my job description." Negative thinking in individuals tends to shut down the problem-solving and decision-making process. The same can be said of negative thinking in organizations. A key aspect of program design and development from a CIP theory perspective is to be aware of the potential for negative thinking and to help minimize its impact on the organization's ability to change and develop in order to meet new programmatic needs.

Organizations can use a variety of methods to provide a detached, objective view of their functioning. Following are several examples relevant to the career center example used earlier:

1. Use an advisory board consisting of members of various stakeholder and constituent groups, such as career center staff, students, employers, faculty, and distance-learning staff.

2. Focus on the formative or process evaluation results of career services related to adult learners involved in distance education.

3. Use external consultants with expertise in career services for adult learners and distance guidance programs.

4. Conduct staff retreats and workshops using innovative staff development techniques to "unfreeze" career center staff thinking so that staff can consider new ways for removing the gap in career services to adult learners.

Thus far, we have explored the logic of a systems view in helping practitioners develop effective career development programs. In the next section, we focus on how a special application of the systems approach, instructional systems design (ISD), can be used to create a career information delivery system.

Instructional Systems Design

The systems approach to the design of effective instructional activities continues to influence program design. Dick and Carey (1985) described a model that may be considered a systems approach because it is composed of interacting components, each having its own input and output, which together produce predetermined outputs. The instructional system also collects information, which is fed back into the system so that the quality of the output can be monitored and evaluated. The Dick and Carey model will be examined in greater detail later in this chapter.

Returning to the high school guidance program example mentioned earlier, many of the expressed student needs for career assistance may be tied to the development of self-knowledge and options knowledge. "What are my interests and abilities?" "How will I decide whether to attend a community college or university?" "How much does a biologist make?" "What does a respiratory technician do?" "How do I get a job now that will pay for a new car?" The guidance department could offer a wide variety of career service activities that would enable students to answer questions such as these, as well as hundreds of others. For example, students could do the following:

- Talk to a career practitioner or community volunteer

- Review a book that describes different occupations (e.g., https://www.bls.gov/ooh/) or an online workbook about decision-making

- Take an interest inventory

- Use a computer-assisted career guidance system

- Watch a video in which a performing artist describes their work

- Talk to a community resource person in a specific occupation

- Create a completely new way to acquire the information needed to solve a career problem

A career center has a variety of learning resources to help clients acquire knowledge and problem-solving skills to make career decisions. The systems approach to the design of career information services can help career practitioners transform human and nonhuman resources into dynamic learning processes to meet individual learning styles in an effective and efficient manner. The instructional systems design (ISD) process offers a valuable guide to structure program design activities.

Modules

Modules are the units of instruction that have been designed to help a learner (the user) obtain specific knowledge or skills. We may describe modules as self-contained units of instruction that have an integrated theme, learning objectives, and the information needed to acquire specified knowledge and skills. A module serves as one element of an instructional system (Dick & Carey, 1985). There are no fixed rules about how long a module may take to complete, how many alternative modes of learning are offered (such as reading a book, viewing a film, or talking with a resource person), whether learners should know in advance about the desired performance outcome, or whether teachers or counselors should be incorporated into the module. However, there is agreement that the module should be validated—that is, that clients using it are able to achieve the objectives specified in the module. The Florida State University Career Center developed instructional modules (now called quick guides) to help practitioners and individuals quickly identify learning resources and activities that will meet specified learner objectives and achieve desired outcomes. Modules are also referred to as Resource Guides in the Service Delivery Tool section of Chapter 7. This chapter includes content on potential topics for resource guides, the design of guides, a process for creating the guides, and how to provide access to the guides.

Career Practitioners

From an ISD point of view, the career practitioner assumes the role of an instructional designer. The role of the practitioner, as a designer of instruction, is to help clients learn to use information to enable them to become independent problem solvers and decision makers. The practitioner also manages the implementation and integration of this instruction into the guidance program and then evaluates its impact on the attainment of program goals and on the environment. Direct counseling activities, from an ISD perspective, are viewed as alternative learning activities or instructional components, and are used to achieving learning objectives and accommodate the unique learning styles of individual clients. As indicated in previous chapters and in the analysis of the cube earlier in this chapter, interventions are selected on the basis of client needs, optimal learning styles, available resources, and lowest cost. Some interventions are too expensive and time-consuming to be used with all clients seeking career services. A modular approach to career service delivery is an organized way of developing and delivering the most cost-effective interventions. Modules typically rely on self-directed learning to promote efficiency of learning.

An ISD Model for Career Guidance Services

The instructional systems design model described in this section may be viewed as a guideline to enhance the Execution phase of the CASVE problem-solving cycle described earlier. It provides a metacognitive framework for developing a plan to implement the solutions selected in the Valuing phase. For example, if it has been decided that the career center should provide activities related to developing a resume, the ISD approach provides a heuristic method for developing a sequence of learning activities to help clients acquire the necessary knowledge, decision-making skills, and metacognitive skills to guide learning processes.

We have modified the ISD model developed by Dick and Carey (1985) in order to make it relevant to designing a career guidance program. Figure 16.5 presents a flowchart of the model.

Figure 16.5

Flowchart for Designing a Career Services Program
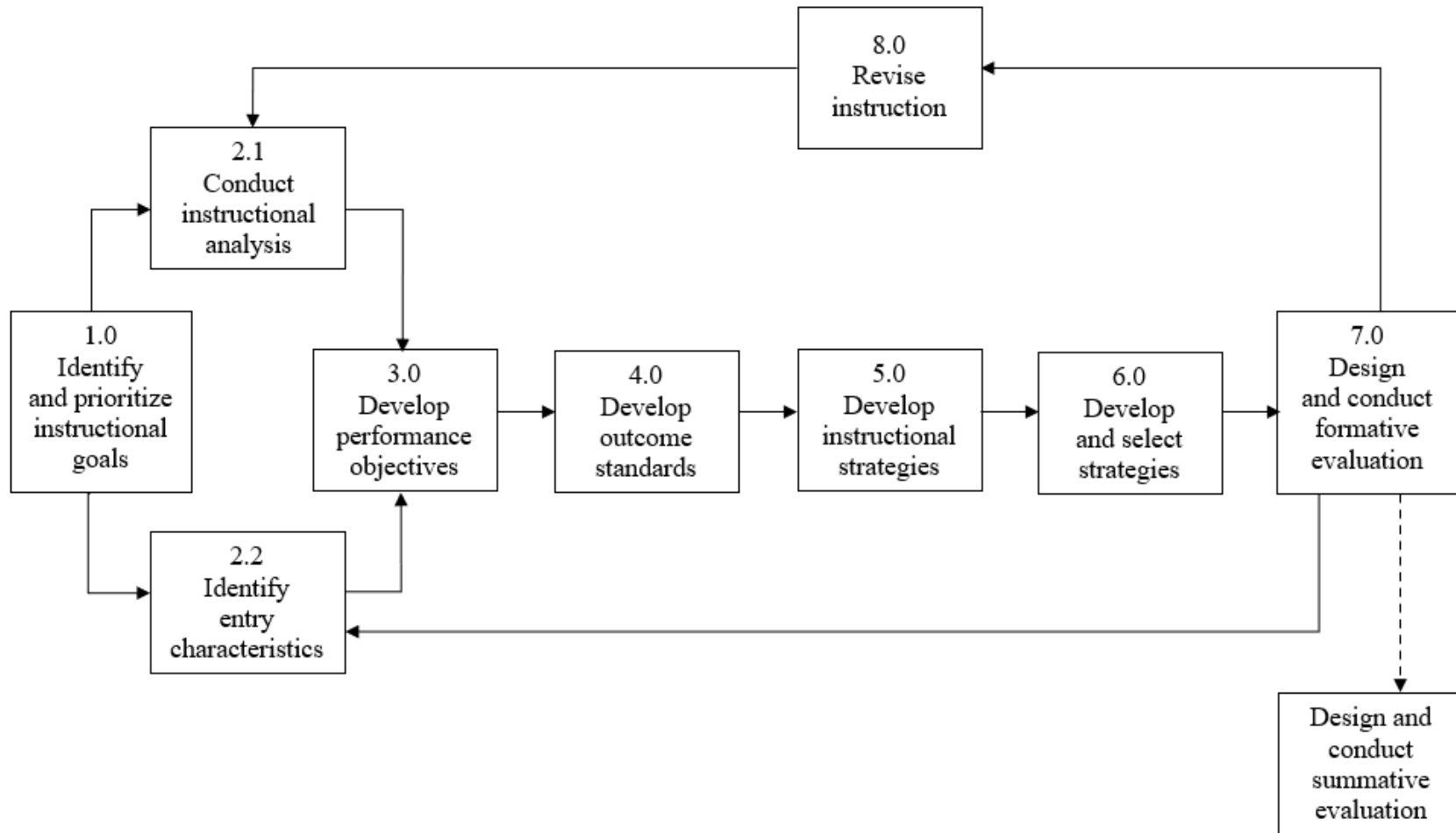
Identify and Prioritize Instructional Goals (1.0)

A learning objective is a statement of an ability or capability that will enable the individual to become a more independent and responsible career problem solver and decision maker. At the program level, goals are statements that subsume the related clusters of skills and knowledge (i.e., objectives) that individuals need to develop. In ISD language, career interventions are learning events that facilitate the acquisition of knowledge, skills, and attitudes. The first step is to determine what individuals should be able to know or do to solve the career problems they bring to the career center.

There are many ways to identify such goals and objectives for learning events. Perhaps you notice that many students using career services inquire about how to identify their interests or abilities, which major fields of study are available at your college, or how to get a job after graduation. Besides using such day-to-day experience, the career guidance staff could conduct a formal assessment of student needs using questionnaires and surveys, or it could respond to administrators who may have targeted certain groups of clients for priority attention (e.g., potential dropouts). Identifying instructional goals may also be related to policies that have been set by committees at the national, state, local, or organizational levels. For example, a parent task force appointed by the parent-teacher organization may have recommended that all graduating seniors in the high school develop a career plan, e.g., by the end of the career intervention, the students will be able to identify and locate occupational information related to their career options.

Conduct Instructional Analysis (2.1)

After a goal is specified, the career practitioner and other team members must thoroughly analyze it in terms of its component parts—that is, its knowledge and skill components. What lower-order skills are needed to achieve higher-order skills? What is the sequence of learning activities for most persons? What resources are available to enable persons to achieve mastery of lower-order and higher-order skills? This analysis could involve holding group meetings, sharing points of view about how learners could be helped, or consulting with an ad hoc client advisory group.

Identify Entry Characteristics (2.2)

Besides the objectives and learning activities of the modules or career guides, practitioners must know the particular characteristics of clients that bear directly on learning. Important entry characteristics may include learner abilities, motivation, expectations, prior learnings, and anxiety level. At this step we need to ask, "What psychological characteristics do individuals bring to the learning process that must be incorporated into the design and use of learning modules or career interventions to serve most students?" The development of a list such as the 50 client questions presented in Table 16.1 can be used to assess the entry-level characteristics and needs of individuals.

Develop Performance Objectives (3.0)

Following the instructional analysis of individual needs and entry characteristics, the practitioner must develop specific performance objectives for the instructional goals assigned to the various modules. A performance objective is a statement of what users should be able to do

on completion of each module or guide. The performance objectives for each module should describe the specific skills the users will learn, the conditions under which these skills will be demonstrated, and the criteria for successful performance. For example, after completing the module on clarifying interests and after taking the Self-Directed Search (SDS; Holland & Messer, 2017), an individual should be able to list at least two appropriate Holland codes and several characteristics of persons in each code. In formal instruction, a pretest is administered, while in career guidance this is accomplished informally through targeted questions.

Develop Outcome Standards (4.0)

In this step, the assessment procedures are specified to measure whether individuals have mastered the performance objectives. For example, an outcome standard could be either a user's improved vocational identity score on a career development inventory or a simple verbal report of an increased level of certainty about occupational interests. In general, there are no pass/fail or grading standards. Attitudinal rating scales or checklists administered in the last session or follow-up surveys can be used.

Develop Instructional Strategies (5.0)

Information collected in the preceding steps of this systems design model will assist practitioners in developing alternative instructional strategies to enable individuals to achieve a module's performance objectives. The strategies or plans for learning activities adopted for the modules should be based on the knowledge and skills to be learned, the characteristics of the users, the resources available (human and nonhuman), and the setting in which help can be provided. Peterson et al. (1991), Sampson (2008), and Sampson et al. (2020) described the use of individual learning plans (ILPs) as a tool to assist practitioners and individuals collaborate in specifying the sequence of learning activities to achieve desired outcomes.

Develop and Select Strategies (6.0)

In this step, a strategy is used to select a set of instructional modules to enable individuals to achieve their goals. There are common pathways that most individuals use to achieve certain goals. These pathways can be set forth in a series of modules. Each of the modules may include pretests and/or posttests, a practitioner guide or user manual, multimedia materials, and other learning activities. Learning activities may include direct or indirect interventions or a combination of the two, using originally developed materials or preexisting materials already on hand in the guidance department. It is important to note that practical constraints often compel practitioners to select from among alternative interventions—it is almost never possible to do everything that is desired.

Design and Conduct Formative Evaluation (7.0)

Following the development of prototype drafts of a module, the practitioner conducts a series of process evaluations—referred to as formative evaluations—to determine whether a module is effective in enabling learners to achieve its objectives and how it might be improved. Formative evaluations may include one-on-one, small-group, and field settings. Each type of evaluation provides the practitioner with a different type of information and feedback for improving the module. In some cases, the practitioner may simply watch some users go through

the module, interview them after completing the module, or ask them to complete a feedback form.

Revise Instruction (8.0)

The final step in the development of a series of modules or career guides is revising the instruction or career intervention. Evaluation data are used to assess the impact of learning activities on the users, to identify any user difficulties in meeting the performance objectives, to reassess assumptions about user characteristics, and to determine if the performance objectives are properly stated. Revisions are made to improve the modules as suggested by the data.

Design and Conduct Summative Evaluation

The dotted line in Figure 16.5 indicates that this step is not part of the instructional design process for each individual module; rather, it is an evaluation of the effectiveness of the modules as a whole. This is the point where the career service program provides information to the larger environment about its effectiveness and impact. A more comprehensive review of program evaluation and accountability is given in later chapters of this book.

These steps in the design of learning events represent the application of a systems approach to the design of career service programs and interventions. Conceptualizing career interventions, especially the presentation of information, as instructional events leading to individuals learning new problem-solving capabilities may represent a departure from the ways practitioners think about their role and the use of career information. The next two chapters provide detailed examples and applications of this model to a typical career services program and discuss how to locate and utilize the information resources necessary to install such a comprehensive career development program.

Training and Supervising Staff for Intervention Fidelity

Intervention fidelity is defined as "the extent to which a career intervention provided in multiple settings is delivered as designed (Spokane & Nguyen, 2016)" (Sampson et al., 2020, p. 25). At the FSU Career Center, intervention fidelity is primarily maintained through ongoing supervision and training for all staff offering brief staff-assisted services in the Career Center resource room and through individual counseling. Initially, all staff complete comprehensive training, which includes both synchronous and asynchronous training. The synchronous, in-person training includes presentations, panels of experts, roleplay activities, and various other interventions that allow individuals to apply the content they learn through their asynchronous online learning experience. The asynchronous modules are housed in the university Learning Management System (LMS), Canvas, which engages individuals through a series of modules to learn about CIP theory, Career Center resources, and how to apply these concepts into practice.

Once individuals demonstrate basic competencies, everyone is invited to attend weekly ongoing training, and everyone providing counseling and career advising services in the Career Center receives regular supervision and attends ongoing in-service meetings to maintain treatment fidelity. While CIP theory does not provide a strict manualized treatment, the CIP readiness model is explicit in the amount and type of service provided for various career problems. Monitoring of intervention fidelity occurs through supervision and in-service training. Supervisors and team members who are more knowledgeable about translating CIP theory into practice mentor and teach incoming staff.

Chapter 16 Summary

This chapter described how career counselors or practitioners can assume the roles of a program developer and instructional designer, and identified some of the career needs experienced by individuals and organizations. A wide range and scope of career-related needs were explored, along with the potentially varied responses available to practitioners for successful interventions. The need to set priorities and policies that will direct programs was also pointed out, and a three-dimensional model was used to frame policy options. Program development in career guidance was described from a historical perspective, and current efforts to utilize a systems approach to program development was explained. The CIP theory-based approach and CASVE cycle were applied to solving organizational problems and designing and implementing possible solutions to address documented organizational needs. Important systems concepts were introduced along with an instructional systems design (ISD) model applicable to the development of career guidance programs. A final section of the chapter introduced and illustrated the idea of intervention fidelity in program implementation. The chapter concluded with the proposition that career guidance programs can be viewed as providing a series of learning events that foster more-effective career problem-solving and decision-making skills and knowledge.

Getting the Most Benefit from Reading Chapter 16

To effectively learn and apply the material in this chapter, complete one or more of the following activities:

- Study the list of 50 client information questions in Table 16.1. Pick one question of interest to you and analyze the question or gap as thoroughly as you can. What assumptions underlie the question or problem? What information do you need and what responding questions would you ask in order to begin to think about ways you might be helpful? Could you answer the question or solve the problem if you had no media resources? What if you could use the public or school library? What media or online resources would you use in the nearest career center? Write your answers to these questions. Pick four more questions and analyze them in a similar way. Discuss your analyses with other students and/or a career practitioner.

- Select an occupation that you know little about and that you would not be interested in pursuing or for which you lack the required skills or training. Identify a person in that field and conduct an information interview to broaden your occupational knowledge and to refine your information acquisition skills. Conduct a second interview with a person in a field you would like to enter. Use the following sample questions to help you prepare your interviews:

  1. *Background.* Tell me how you got started in this field. What was your education? What educational background or related experience might be helpful in entering this field?

  2. *Work environment.* What are the daily duties of the job? What are the working conditions? What skills and abilities are utilized in this work?

  3. *Problems.* What are the toughest problems you handle? What problems does the organization as a whole have? What is being done to solve these problems?

4. *Lifestyle.* What obligations does your job put on you outside the work week? How much flexibility do you have in terms of dress, work hours, and vacations?

5. *Rewards.* What do you find most rewarding about this work, besides the money?

6. *Salary.* At what salary level would a new person start? What are the fringe benefits? What are other forms of compensation (bonuses, commissions, or securities)?

7. *Potential.* Where do you see your work going in a few years? What are your long-term goals?

8. *Promotion.* Is turnover high? How does one move from position to position? Do people normally move to another company/division/agency? What is your policy about promotions from within? What happened to the person who last held this position? How many have held this job in the last five years? How are employees evaluated?

9. *The industry.* What trends do you see for this industry in the next three to five years? What kind of future do you see for this organization? How much of your business is tied to the economy, government spending, weather, supplies, and so forth?

10. *Demand.* What types of employers hire people in this line of work? Where are they located? What other career areas do you think are related to your work?

11. *Hiring decision.* What are the most important factors used to hire people in this work (education, past experience, personality, special skills)? Who makes the hiring decisions for your department? Who supervises the boss? If I apply for a job, whom should I contact?

12. *Job market.* How do people find out about your jobs? Advertisements in the newspaper (which newspaper?), word of mouth (who spreads the word?), online job listing sites, or the personnel office?

- Study the flowchart in Figure 16.2, and then visit a career center, counseling center, or other human services office to collect information about how basic services are provided. Interview a staff member in that setting about how services are provided; then see if you can draw a flowchart that shows how basic client services are provided in that office.

- Imagine that you are a career practitioner at work in a setting of your choice. It may be a setting you have worked in before or a new one. Your director has asked you to begin planning for a program to remedy some problem in that setting. Study the flowchart in Figure 16.4, and prepare a six-step outline for developing the program.

- Pick one of the questions in Table 16.1, and use the ISD model in Figure 16.5 to describe how you might go about the process of creating a simple module or career guide to solve the client's problem. Use a sentence outline that covers each step in the model, including issues or questions that are unresolved. Ask for feedback from your instructor, classmate, or colleague following their review of your outline.

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CHAPTER 17
DEVELOPING AND IMPLEMENTING A CAREER SERVICES PROGRAM:
A PERSONAL HISTORY

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This revised and updated chapter is organized in two parts. Part One (Program development from 1968-2022) is a revision of the original chapter written in 2003 about the author's leadership in the development of a novel career information center (CCIS) on a university campus. It was relocated several times over a dozen years and ended up in a larger career center. Part Two (Program development in 2022 and beyond) is an update of the original chapter with details about how the first idea of an approach to program development using Instructional Systems Design has been incorporated into a comprehensive career center in 2022.[66]

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[66] Content in this chapter was used or adapted from Sampson et al., (2004; 2020). Used or adapted with permission.

Part One: Program Development from 1968-2022

In the late 1960s, staff counselors in the university counseling center frequently convened for several hours in open-ended group sessions to freely and candidly exchange views on personal and organizational performance. These were called "encounter groups" and they were common at the time. On one memorable day when we were discussing staff roles and responsibilities, the director turned to me and said, "And what do you do here?" I was shocked, hurt, and embarrassed but finally stammered that I thought everyone knew I was the career counseling specialist. But he persisted, "What are you doing?" I was at a loss—he clearly wanted a better explanation of how I was contributing to the goals of the center. I needed to figure out how to have more of an impact as a career counselor. Robert C. Reardon

There are varied organizational needs that provide a basis for implementing a career services program, but that personal experience more than 50 years ago was a primary motivator for me. Program development and implementation ultimately depend on an individual picking up a challenge, getting personally involved, and making a personal and professional commitment. Many other resources are needed to build a good career development program; but in the final analysis, one person makes the difference by choosing to be a program developer and leader.

This chapter describes, in a personal way, the author's experience in designing, developing, and operating an initial career service program from 1968-1980, the Curricular-Career Information Service (CCIS), and then describes ongoing program development at the university through 2022. Many of the ideas for CCIS were based on elements of cognitive information processing theory (CIP; Sampson et al., 2020); others were based on the unique circumstances at Florida State University (FSU) in the late 1960s and early 1970s. After reviewing this chapter, the reader should be able to (a) think more concretely about the personal commitments required to develop career programs; (b) analyze more thoroughly, using the CASVE cycle model, the factors operating in a work setting that might influence career program development activities; (c) use instructional modules to deliver career interventions; and (d) align personal career development with the mission and operation of a career services program. The chapter begins with a case study of program development from 1968-2022, followed by an examination of program development in 2022 and beyond. The chapter concludes with a chapter summary, and recommendations for getting the most benefit from reading the chapter.

The Organizational Context

Effective career interventions, including self-help, brief staff-assisted, and individual case-managed approaches, require facts and data about occupations—for example, occupational descriptions and outlooks. Individuals in decision-making situations transform these facts and data into personally relevant knowledge structures (schemata), which are useful in solving career problems and making career decisions. Professional career practitioners seek to design a career services program or system in which clients can easily locate and process information for career problem solving and decision-making. The physical setting for this activity is often a career center, which might also be called a career laboratory, a career information center, a career resource center, a career and life planning center, a career dynamics laboratory, an information room, or even a futures shoppe. (In 1909, Frank Parsons called it a Vocations Bureau.) For consistency, we will use the term *career center* to refer to the organizational entity (space plus

personnel) in which career services are offered. In Chapter 16, typical questions and concerns were listed from clients who came to CCIS for assistance. A review of these questions prompted a group of staff to think about the facts and data needed in a career center to help clients identify useful information for their career problem solving and decision-making. In other words, these questions framed gaps to be remedied through career interventions or programs (Sampson & Lenz, 2023).

Clients come to a career center by many pathways. For example, a client might be completing a research assignment for a course, doing personal research for a decision they are facing, following through on a referral from a faculty member, or returning after an earlier visit. Some clients come to the career center with a friend or family member, and some arrive alone. Some are confident and self-directed; others are anxious and need reassurance.

Whatever the circumstance, the career center must present a positive, accepting, attractive, neat, organized, helpful public image. Everything about the career center's operation should promote and reinforce client problem-solving behavior by assisting the clients to seek and find information that will help them identify and explore career possibilities. A study at the University of Missouri showed that career counseling conducted in a career resource center was much more effective in promoting career exploration and problem solving than career counseling conducted one-on-one in a counselor's office or an interview room (Kerr, 1982). See Chapter 18 of this book and Epstein and Lenz (2008) for a more detailed discussion of designing career resource centers.

A cube (see Figure 16.1) was presented earlier as a device for depicting the policy issues inherent in career program design. The shaded portion of the cube, which represents the most cost-effective interventions, was the focus of our initial program development efforts. The career service we wanted to implement was based on the following premises: (a) respond first to the most simple, basic client information needs; (b) provide the least complex interventions; and (c) draw on basic staff competencies or skills. Later, more complex career service interventions were integrated into the offerings in this career center, and these will be described later in the chapter.

Establishing a Career Services Program: A Personal Account

How do career practitioners get involved in organizing an array of materials and resources into a comprehensive program of career services? Perhaps John Holland's RIASEC theory (Holland, 1997) can provide us with some clues for answering this. The Holland code for counselor is SAE, project director is ESI, department manager is ESA, training and education manager is EIS, grant coordinator is SEI, and program manager is EIR. Given these occupational titles and codes, the summary code for "program developer" is EIS. For career practitioners to become successful program developers and managers, it seems clear that they must draw heavily on their skills and interests in the "Enterprising" and "Investigative" areas. This can be a personal and professional challenge.

In 1969, Florida State University took the first steps toward creating a novel career services program, later called CCIS (Reardon & Minor, 1975) and I began to increasingly invest myself in improving career services in significant ways. [Because this history on establishing the center is a personal account, the first-person singular is being used for this section of the chapter.] This meant that I began to get irritated about the lack of quality of career services

available for students and the deficiencies of counseling and advising services at the institution. It also meant that I was willing to become known as the vocational person among the other counselors. This was significant because "career stuff" was not a high prestige area among the other counselors, who were generally more interested in other matters, including stress management, and sensitivity training (Burck, 1984). Coincidentally, during this time I was asked to write several instructional modules and was the recipient of some workshop training in instructional systems design. The convergence of these two personal experiences led to the conceptualization of a career information delivery system based on an instructional systems design (ISD) model (Dick & Carey, 1985).

The development of CCIS was marked by various organizational and administrative accidents, but I found that the CASVE cycle, Holland's RIASEC theory, and the ISD model provided useful guides for the program's continuing operation and growth. The CASVE decision model used in this book is employed as a metacognitive framework to trace the history of CCIS. The purpose is to show how the model can be successfully adapted and used as a problem-solving strategy for practitioners in designing and developing career services programs.

Communication

Even the casual observer could see gaps in the career services provided at the university in the late 1960s. These were some of the incidents that I noticed signaling a need:

- On an intake form, 75% of the students coming to the counseling center wanted career planning assistance.

- Most of the entering students at the university expressed a need for career information—it was their most frequently identified need.

- Several studies of academic advising showed strong student dissatisfaction, especially with regard to career advising.

- The counseling center resources for career information were minimal, consisting of two file drawers of occupational folders and approximately a dozen books, which were accessible to students only after an intake interview.

On closer inspection, several other findings emerged. A volunteer research assistant interviewed 50 academic administrators, faculty and student leaders, and student services staff and found a strong consensus that something dramatic and different needed to be done to improve academic and career advising in the university.

- Several dissertations; a previous Louis Harris survey of faculty, staff, and students; and an accreditation self-study report were located. All of these showed dissatisfaction in the way in which sources of career and academic information were made available to students needing to make career decisions.

- Novel things were being attempted in other places to provide career information to students. Tom Magoon at the University of Maryland used an old jukebox to provide students with information about majors (Magoon et al., 1971). Some developers, such as David Tiedeman at Harvard and Martin Katz at Educational Testing Service were experimenting with computer-based career information systems (U.S. Department of Health, Education, and Welfare, 1969). Student paraprofessionals were being trained to

help other students with a variety of academic and personal problems (Brown, 1965). Some counseling centers were experimenting with outreach programs to provide career services (Morrill & Banning, 1973).

- Career placement, career counseling, and academic and career advising were isolated, administratively separate units within the organization (Hale, 1973-74).

Therefore, a study of the organizational history and environment at the university revealed numerous indicators of a gap between the real and ideal state of affairs regarding the collection and presentation of career information and services for college students seeking to make educational and career decisions. The nature of the gap was that there was neither sufficient educational and occupational information available for students nor assistance available to help them use such information to make career decisions. The few information materials that were available were inaccessible and not used in a way to enhance the development of career problem-solving and decision-making skills. However, there was evidence of readiness within the organization to change this state of affairs.

Analysis

These problems had existed for a long period of time. They were complex, and there were no easy solutions. I began a thoughtful and time-consuming review of the situation. I read books and articles on career decision-making. I talked with anyone I could find about the problem and what I might do about it. Quite by accident, David Tiedeman spent several summers teaching at FSU during this time, and he proved to be an inspiring mentor who reinforced my motivation to do something about the problem. He had just concluded development of the computer-based Information System for Vocational Decisions (ISVD; Tiedeman, 1968) and was a veritable storehouse of knowledge about career information delivery problems and possible solutions. John Holland also visited our campus for a symposium during this period and brought a novel point of view regarding self-directed career assistance (Holland et al., 1972). A senior faculty member on campus, Joyce Chick, had written a monograph on innovations in the use of career information (Chick, 1970), which provided some fresh ideas on the subject.

In talking with academic deans and other leaders about the problem, I discovered that many faculty members and administrators tended to make a distinction between academic or curriculum information and occupational or career information. Indeed, one key academic dean thought it highly inappropriate that non-PhD staff or student paraprofessional counselors be allowed to transmit academic information to students—that is, to discuss majors and career possibilities. Inquiring further, I discovered that although much of the information needed by students was available, there was no roster of faculty resource persons who would be available to discuss major field requirements. Moreover, there was no easy way to make such a roster available to students; nor did anyone really want to take responsibility for such an endeavor.

Finally, in this Analysis phase, I discovered that (a) several faculty in the College of Education's counselor education program were highly interested in creating a career counseling or career development emphasis in the master's and bachelor's degree programs; (b) other postsecondary schools around the nation were experiencing similar problems in presenting career information; (c) several colleges on campus were successfully using trained graduate students as paraprofessional academic advisers, although this was strongly resisted in the other colleges; and (d) many of the student information needs for career problem solving were recurring and

repetitive in nature. To make some sense of this review, I wrote an article on what the counselor's role in career information might include and it was eventually published (Reardon, 1973). This writing activity allowed me to put my thoughts together in a coherent manner, setting the stage for the Synthesis phase.

Synthesis

In the process of collecting data and thinking about the problem, I generated many ideas that helped me frame possible solutions. In the Synthesis phase, these potential solutions began to become more concrete with respect to possible implementation at the university. Emerging ideas for a possible program intervention included the following:

- Given the students' extensive need for information and their image of the counseling center as exclusively a mental health and therapy unit, one idea was to establish small career information centers in residence halls or in the lobby of the student union.

- The university library had some potential—it already had some limited career resources in a reading room, it was open many hours each week, it had some space, and it was experienced in the information business. However, it was not quite ready for a career service center to move into its space.

- The notion of a self-help program had some attractiveness. Such a program would not involve case records, intake interviews, or appointments. It would be truly client centered; that is, services would be matched to specific client needs according to the cube presented in Chapter 16.

- The idea of developing a multimedia career information delivery system with computer terminals, audio- and videotapes, filmstrips, slide tapes (synchronized color slides and cassette tapes depicting specific occupations), brochures, and handouts seemed worth pursuing. Appropriate use of media capabilities was thought to be cost effective, but, more importantly, it would foster the development of independent career problem-solving skills.

- It was important that both educational and occupational information be included in the resources. Campus and community referral contacts for additional information or support services would complement the information resources and activities of this career center.

- It seemed as though such a new career center could be staffed by student paraprofessionals and preprofessional career counseling interns—this would help separate it from the clinical image of the counseling center.

- Instructional systems design, including the use of modules, seemed to offer a useful process for the development of program components.

Reactions from others within the organization began to emerge in response to these ideas. As Urie Bronfenbrenner (1966) once said, "If you really want to understand a system, just try to change it." First, the dean of academic affairs was uncomfortable about delegating some of the responsibilities for academic advising to the division of student affairs where the counseling center was administratively located. Second, there was extensive support elsewhere for doing something about the problem, including the president's office and all of the student affairs offices. Third, it was becoming apparent that the new program would need to be centered in the

shaded part of the cube; that is, it would have to offer simple, low-cost interventions for as many students as possible. Fourth, program accountability and opportunities for research must be evident from the outset.

Valuing

In the Valuing phase, I began thinking about the consequences and the advantages and disadvantages of intervention alternatives for myself and others who were important to me. I then developed specifications for optimal solutions to the problems; Kaufman (1972) referred to these specifications as solution requirements. I found that the development of a career services delivery system at FSU involved some very difficult choices. My decisions were ultimately reflected in policy (or rules) for the design and operation of the system.

First, I made the decision to use instructional systems design (ISD) as a model for structuring the program development process. That is, the design began with an appraisal of client learning needs. This meant that the role of the counselor or paraprofessional could be significantly altered in accordance with the targeted client needs. Thus, the delivery of information for career problem solving would not always be controlled by the counselor. From an ISD perspective, I saw interacting with a counselor simply as one possible learning activity among others, such as reviewing audio- or videotapes or interacting with a computer-assisted career guidance system. The important consideration was to identify the most efficient means of helping students master explicit learning objectives to meet their needs. Thus, for most persons the program would function more like a learning resource center or a comprehensive modern library than a traditional counseling center. In traditional counseling centers, the organizational structure, staffing, and physical facilities are all designed to provide environments for the establishment of confidential counseling relationships, and this would not be the case in the career center I envisioned.

Second, I decided that the program would be located in student living areas and high traffic areas such as the student union, and not in the counseling center. In this way, information would be more accessible to students.

Third, the primary clients should be lower division undergraduates who require information to choose majors and to plan careers. Lower-priority clients should include high school and community college students anticipating transfer to the university. The program would be informal and developmental in nature. The program mission—that is, the specific client needs the program sought to address—would not include helping students who were job hunting, students who were experiencing a personal crisis or who were in an intense emotional state such as acute depression or anxiety, or students with specific academic questions involving the interpretation of academic rules and policies. Referrals to other appropriate campus or community services should be provided to those students. [Note that full-time and part-time employment assistance and mental health counseling were included later in a comprehensive FSU Career Center in 1980 and 1990, respectively.]

Fourth, the program would attempt to develop information resources that could complement the work of professionals external to the system, such as financial aid advisers, personal counselors, and faculty or academic advisers. The career service center should not require a large professional staff.

Fifth, the program would strive to be innovative and to extend our knowledge about how to use information creatively in career services. Even though the program would address local needs, it would also seek to serve as a model for the offering of career services in other educational settings. I believed that the client needs addressed by CCIS were not unique to Florida State University. This research and development function seemed consistent with the mission of a graduate, research-oriented university.

Finally, the Valuing phase involved my personal commitment to build a professional career identity around this activity—to select and train staff, to write and conduct research in the area, to be vigilant in pursuing internal and external funds for the development of the program, and to become more deeply involved in learning about and implementing a career service using the principles of instructional systems design.

All of these choices involved making personal and organizational value commitments to a particular course of action, and at the same time deliberately not choosing other alternatives. Indeed, I assumed considerable risks. What if this new ISD algorithm for the design and development of career service did not work? It had not yet been applied to the counseling and guidance area. What if students did not come in? Could they and would they use self-help without the direct involvement of a professional counselor? What about the unintended effects from this intervention? Would students with low grade point averages come in and explore information about becoming a physician and unsuccessfully pursue that occupation as a career? What if the program failed? And for myself, could an academic career be successfully built around this activity with a reasonable chance for promotion and tenure?

Execution

In the spring of 1972, the vice president for student affairs mandated that a pilot career information program be developed and located in a residence hall. Consequently, I procured resources to support development costs from a variety of sources: furniture was donated from other student affairs offices; funds for two student assistants were allocated by the counseling center; the student government provided funds for audiovisual equipment and for listening and viewing carrels; an unpaid doctoral student looking for a dissertation project agreed to use an evaluation model to assess the impact of the pilot program; a professor of library science volunteered to have students in a cataloging class create an indexing system for our materials; the career placement office asked IBM to donate funds for furniture and they did; the president's office provided $15,000 in additional operating funds; and the vice president provided funds for a halftime project coordinator. Six months were to be devoted to developing the pilot program, and another six months to testing it.

I secured funds and directed the development of five instructional modules (Reardon & Domkowski, 1977):

1. "CCIS Introduction," which included a slide-tape overview of the program goals and a user orientation to the program's operating procedures.

2. "Decision Making," which included two slide-tapes on common myths about career decision making, a model strategy for making a career decision, and several booklets on career decision making.

3. "Self-Assessment," which featured Holland's recently published Self-Directed Search as an activity for exploring interests and personal characteristics and for identifying occupations for further exploration.

4. "Information Resources," which featured a card catalog and a small library of audiotaped occupational information interviews and faculty interviews on majors, a four-drawer cabinet of folders of occupational and academic department information, reference books on careers, and education directories.

5. "Referral Resources," which included community and faculty resource directories.

These basic modules have been modified over the years and they are now called Quick Guides. More information about these resources is presented later in this chapter.

The CCIS pilot program was formally launched in January 1973 and concluded in May 1973. Following a review of the evaluation report, the university established the Curricular-Career Information Service as an ongoing program in the fall of 1973. I opened a second CCIS center, in addition to the residence hall location, in the student union (Reardon, 1977) and made plans to establish a third center in an academic building on the opposite side of the campus. However, an unexpected series of budget and administrative crises from 1974 through 1979, eventually led to only a single CCIS center in 1979, which was located in the newly created Department of Career Development Services. This new unit became the Career Center in 1984, and included career placement and cooperative education. However, in spite of these administrative changes, CCIS, now named Career Advising, Counseling, and Instruction (CACI), has maintained and enhanced its activities consistent with the original program mission and design. The CASVE problem-solving process has continued to guide the evolution of the CCIS program and related services in the Career Center.

Part Two: Program Development in 2022 and Beyond

The scope and function of the career services program at the university in 2022 is described in this section. The purpose is to show how a small career services program, developed by means of a systems approach, has grown into and merged with a more complex university program with many varied products and services. The purpose is to illustrate how a "living" social system, in this case the CCIS career services program, has adapted to changing conditions in the external environment—that is, facility relocation, personnel, technology (Internet), pandemic, and university structure. During this time, the use of the CASVE model has helped focus program development efforts. I believe that the same CASVE problem-solving heuristic used to address the early FSU career services problems can be generalized to other organizational settings, including public schools, community colleges, colleges, universities, public libraries, nonprofit and government agencies, and private corporations.

In this section, I provide an example of the vision and mission statements for a career services program and discuss the nature of its development. The mission statement is a capsule statement of the philosophy of a social system. I then move to a description of four continua for evaluating career center services, and where FSU stands in each area, specifically teaching, research, and service. Along the way, I describe the experiential career learning program and the launching of remote career service delivery after the onset of COVID. Finally, I highlight several other programs that are consistent with the initial CCIS initiative. These include a focus on

student-centered services in the online-career portfolio, theory-based approaches, and fundraising.

Vision, Mission, and Structure of the FSU Career Center

Regarding vision, "The Florida State University Career Center strives to be the preeminent career center model for designing and delivering comprehensive, innovative, and inclusive career and employment services." "The FSU Career Center's mission is to provide comprehensive career services, train career service practitioners, conduct life/career development research, and disseminate information about life/career services and issues to the university community, the nation, and the world" (Florida State University Career Center, 2020; https://career.fsu.edu/sites/g/files/upcbnu746/files/Final_CareerCenter_AnnualReport_AY1920_1.pdf).

These two statements align and integrate the career center with the larger mission of the university, in this case a graduate-oriented research university of over 40,000 students. This is the suprasystem in which the Career Center operates. It has continued to adapt and adhere to the university's mission, which is centered on teaching, research, and service. Teaching both undergraduate and graduate students, research, and service to the local community, state, nation, and the world are the three traditional elements of a large research university such as FSU. At times, this Career Center has been referred to as a "teaching career center" (Lenz & Reardon, 1997), an indication of the intrinsic links between service, teaching, and research.

Program Structure and Function

In 2022, the FSU Career Center was administratively organized in four units: Career Advising, Counseling, and Instruction (CACI, formerly CCIS); Experiential Learning (formerly Cooperative Education, Career Experience Opportunities); Employer Relations (formerly Career Placement); and Tech Center (Center for the Study of Technology in Counseling & Career Development, affiliated with the Department of Educational Psychology & Learning Systems, College of Education). The organizational chart is shown in Figure 17.1. Given the modest beginnings of CCIS with 3 staff and 4 graduate assistants, there are now 39 paid staff, 4 volunteers, and a score of graduate assistants and interns in the Career Center.

Figure 17.1

Florida State University Career Center Organizational Chart
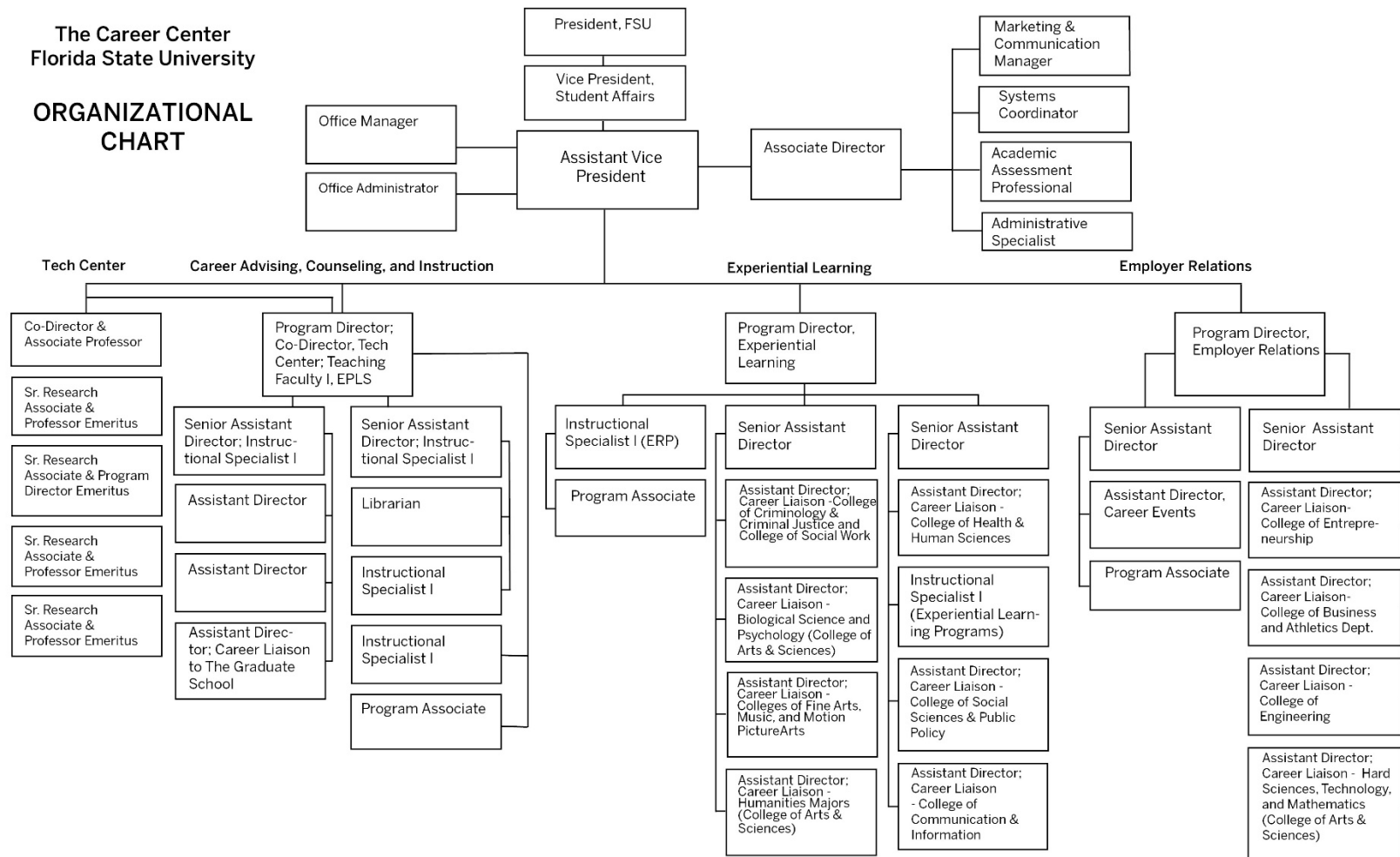
Services in the FSU Career Center are consistent with the delivery of career services in college or university settings and can be categorized along four continua (Vernick et al., 2000). The first is *involvement in career development* including services through career advising, counseling, assessment, and information and the extent to which this is done in the career center. The second is *involvement in experiential education* and the degree to which externships, internships, cooperative education, and related programs are housed in the career center. The third is *locus of placement* (now called employer relations) and the extent to which this program is centralized in the career center. Finally, the *locus of funding* for the career center concerns the extent to which it is self-supported through student and employer fees or is funded by the institution or government or some combination of these sources.

FSU's comprehensive career center offers the following core programs and services: career advising and intake; individual and group career counseling; assessment and computer-assisted guidance; career information; career planning classes for credit; career education outreach; experiential education; career expositions; on-campus recruiting; and job listings and resume referral services (Vernick et al., 2000).

A Systems Perspective of the Mission

A large, residential, research university such as Florida State traditionally has a threefold mission: (a) teaching undergraduate and graduate students; (b) research; and (c) service to the local community, the state, the nation, and the world through professional associations, workshops, presentations, and so forth. Of these three mission areas, a career center most easily contributes to the *service mission*, especially to assisting current students and perhaps alumni. But a career center in a university has a unique, boundary-spanning role; it serves constituents outside the university, such as parents, employers, prospective students, and government agencies. A systems approach suggests that a career center could interact with the suprasystem— namely, the university and the larger environment. In the following sections, I describe several innovative and current programs that illustrate this tripartite systems view of career services.

Teaching

- Career Center staff teach 12 sections of a variable credit, career planning class enrolling 375 students annually (https://career.fsu.edu/students/plan-your-career/sds-3340-introduction-to-career-development). The course and related textbook were revised and developed over 45 years by Tech Center staff and others (Reardon et al., 2022). Career guides are incorporated into the course, and career library resources serve as a field-based course laboratory. The course, SDS 3340 Introduction to Career Development, is administratively located in the College of Education and physically operated in the Career Center.

- The Career Center supports graduate level instruction by training 15-20 graduate students in career advising and counseling annually (Saunders et al., 1999; Osborn, 2021). The availability of practicum and internship students to deliver brief staff-assisted and individual case-managed interventions contributes to the Career Center's service delivery mission. In order to broaden the training experiences of graduate students, the Career Center provides free services to local community members who are not FSU students.

Besides internship and practicum training, the Career Center provides an opportunity for supervised teaching and directed individual studies for graduate students.

- FSU adopted an experiential learning graduation requirement, perhaps the largest university in the nation to do that. It is managed by the Career Center's Experiential Learning Program. The initiative involved hiring a number of new career liaisons for colleges with majors not having traditional experiential learning requirements. This program includes a zero-hour course, a one-day job shadow program, paid on-campus internships, and more (Lord et al., 2020).

- The Career Center created ProfessioNole Pathways, an online professional development series that helps students master the career-ready skills employers seek in college graduates. The interactive activities, informative videos, and module quizzes develop students' skills in a variety of areas including critical thinking, oral and written communication, teamwork, digital fluency, leadership, professionalism, and career management. This Canvas-based program, available 24/7 to all FSU students, is being integrated into many courses.

Research

- The Tech Center staff have compiled an extensive bibliography with hundreds of documents on CIP theory, research, and practice developed at FSU that is updated annually (Sampson et al., 2023), *A Bibliography of Cognitive Information Processing Theory, Research, and Practice*. https://career.fsu.edu/tech-center/resources/cip-theory-and-research.

- FSU researchers have published 15 articles by 23 authors in refereed journals describing successful outcomes of the FSU career course. Altogether, 25 studies have been conducted by 39 different researchers using data from the career course (Reardon & Lenz, 2018). The Tech Center worked with the university institutional research board and created an archival research data source to document the course's impact and contribute to studies of vocational behavior. Studies such as these document the efficacy of this career intervention (Brown, 2015) and support researchers.

- Tech Center staff have conducted research on the comparative effectiveness of the paper, computer, and Internet versions of the Self-Directed Search (Lumsden et al., 2002; Reardon & Loughead, 1988).

- The Career Center assisted in the creation of a novel research and development center, the Center for the Study of Technology in Counseling and Career Development, which provides a vehicle for research on the study of computer-based career interventions and the application of cognitive information processing theory (see https://career.fsu.edu/tech-center).

- The Career Center demonstrated the feasibility of telephone-based career counseling outreach from CCIS (Roach et al., 1983).

- In 2019-2020 AY, the Career Center staff published 13 scholarly articles of research related to career services (Final_CareerCenter_AnnuaReport_AY1920_1.pdf (fsu.edu)).

Service

- The Career Center was able to maintain an uninterrupted comprehensive array of services for students, employers, staff, and community members by developing a website specifically designed for outreach during the COVID-19 pandemic. Information about virtual and in-person services remains available at https://career.fsu.edu/careeradvising.

- In 2019-2020 AY[67] the Career Center conducted 18,880 career advising and counseling sessions; 4,768 career outreach programs; 42,436 job listings and resume referrals; 342 employers and 4,617 students participated in on-campus recruiting; 17,194 students and 1,488 employers registered for career fairs; 13,173 students in academic internships; and 1,934 new student career portfolios were created (Florida State University, 2020; https://career.fsu.edu/sites/g/files/upcbnu746/files/Final_CareerCenter_AnnualReport_AY1920_1.pdf).

As with the original CCIS program, these data indicate that the current FSU Career Center has continued to adhere to the systems approach to program development and services in relation to teaching, research, and service. In the following sections, I highlight several other programs that are consistent with the initial CCIS initiative. These include a focus on student-centered services in the online-career portfolio, theory-based approaches, and fundraising.

Career Portfolio

In 1998, FSU's president invited the Career Center to consider development of a program to assist students in chronicling and communicating professional skills to employers (an event occurring in the Communication phase of the CASVE cycle). In response, the Career Center, in cooperation with the university Administrative Information Systems unit (AIS), developed an on-line FSU Career Portfolio system (Lumsden et al., 2001). This on-line service (a) educates students on the importance of developing professionally relevant skills throughout college while providing information regarding the array of programs, activities, and services available on and off-campus to develop these skills; (b) provides a system for students to chronicle their skills throughout their collegiate experience; and (c) allows students to develop an on-line portfolio available to employers or graduate/professional schools. Preview materials and documentation about the FSU Career Portfolio system are available at https://career.fsu.edu/portfolio/history-and-development. Students can manage the FSU Career Portfolio with support from career advisors/counselors, academic advisors, and faculty/staff, and they can then make the resulting portfolio available on-line to employers or graduate/professional schools. As with the original CCIS program, this Career Portfolio is student centered and based on an ISD model.

Theory-Based Services

From the earliest days with CCIS, the FSU Career Center has incorporated Holland's typological theory of career development into many of its programs and materials. The Self-Directed Search (SDS; Holland, 2017) is used in three levels of service delivery: (a) self-help services, (b) brief staff-assisted services, and (c) individual case-managed services (Sampson & Reardon, 1998; Sampson et al., 2020). An important element of Holland's theory is the idea that

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[67] Note, given the impact of COVID on 2020-2021 data, 2019-2020 data was used to give a more accurate picture of typical service delivery levels.

all individuals are characterized by a personal career theory (PCT). A PCT is "a collection of beliefs, ideas, assumptions, and knowledge that guides individuals as they choose occupations or fields of study, explains why they persist in them, and is used by people as they go about making career decisions" (Reardon & Lenz, 1999, p. 103). At the FSU Career Center, career advisers and professional staff consider an individual's PCT in assessing the client's level of needs and structuring career interventions.

As noted previously, a second career theory is also used extensively in the FSU Career Center. Cognitive information processing theory (CIP) was developed by faculty members at the FSU Career Center (Peterson et al., 1991; Sampson et al., 2020). The goal of CIP theory is to teach individuals new methods of career problem solving and decision-making (Lenz & Reardon, 1997; Sampson, et al., 2023). This theory is applied in practice at the Career Center, especially in career counseling and advising. Both *Career Development and Planning: A Comprehensive Approach* (Reardon et al., 2022) and the Career Thoughts Inventory (Sampson et al., 1996) are the result of the development and application of CIP theory. The manner in which career theory is applied to both service delivery and training is an additional manifestation of the three-part mission of the FSU Career Center. Information on key elements of the CIP approach is available at https://career.fsu.edu/tech-center/resources/service-delivery-handouts.

Fundraising

Over the years, FSU Career Center staff have been involved in multiple efforts to develop proposals for external funding (Bash & Reardon, 1986; Hoover et al., 2013). Such gifts are tangible evidence of the value accorded to the career program services and products in the external environment. If the social system is functioning well, then positive feedback will come in the form of gifts and rewards for the works produced. These gifts from alumni, employers, and friends of the Career Center, in turn, provide resources for services to students and community members, as well as to employers. Fundraising programs include Employer Partners, Named Rooms, the Career Advisor Scholarship Program, Friends of the Career Center, and other programs for major gifts. Employing organizations may elect to become a Partner at varying levels (https://career.fsu.edu/employers/partner-with-the-career-center) by contributing to the Career Center, or they may have a room in the Center named for their organization.

The Career Advisor Scholarship Program (https://career.fsu.edu/alumni-family-community/career-advisor-scholarships) is aimed at individuals wishing to provide support to graduate students pursuing careers in the field of career counseling and human resources. This program is a unique and important initiative of the Career Center because it helps fund the education of students who will someday become professionals in the field of career development. It includes eight endowed funds with named scholarships. Since its inception in 1995, external gifts to sponsor Career Advisor Scholarships have totaled over $746,475, and $330,168 has been awarded in 198 scholarships to 135 different students.

Some Personal Reflections

I have learned some lessons (and will continue to learn more) from this experience of developing a career services program.

- Clients will take a great deal of responsibility for finding and using career information if helpful people and an effective career information delivery system are available. Career practitioners can confidently promote self-help methods.

- The instructional systems design model provided a useful guide for designing instructional units in which human, print, and electronic resources are coordinated to help clients achieve learning objectives.

- Career clients want information—they view it as absolutely essential to career problem solving and a good system, encompassing both physical and virtual formats, must be attractively packaged for them.

- Delivery of career information via print, computer, or other media (as opposed to person-to-person delivery) is attractive to many administrators; the hardware is tangible evidence that a system exists, and it facilitates program accountability. An effective career programs delivery system needs to connect with the goals of the larger organization in as many ways as possible for both strategic political reasons and pragmatic service delivery purposes.

- And on the personal level, the design and implementation of a career services program such as CCIS and Florida State University's comprehensive Career Center can become an all-encompassing life and career venture where opportunities continually emerge for the application of creativity and vision.

Chapter 17 Summary

This chapter provided a personal case study of the 60-year involvement of one counselor and institution in implementing a career services delivery system to meet the specific needs of clients with certain characteristics. This case history showed how the personal and institutional commitment of time and resources, together with a problem-solving approach using the CASVE cycle and an instructional systems design (ISD) model, led to the creation of CCIS, a career services program. The successful operation of this program in the larger environment was traced to the ongoing development of the larger Career Center at FSU. I believe that the CASVE problem-solving paradigm and ISD can be successfully applied to the design, development, and evaluation of career programs in other organizational settings.

Getting the Most Benefit from Reading Chapter 17

To effectively learn the material in this chapter, complete one or more of the following activities:

- From a review of the personal case history on the development of the career services program in this chapter, identify three of the most critical or important assumptions, premises, values, or environmental influences described by the author that you think had a bearing on the program's success. Name one thing that might have been important that the author did not mention. Compare your lists with those of two classmates or colleagues and determine where you agree or disagree and why.

- "The establishment and operation of a successful career service center has more to do with history and with external, environmental forces than with a person." Prepare a case

for or against this proposition, and debate the issue, with two teams taking opposing views.

- Identify an organizational setting different from the one in this chapter, perhaps an elementary school, high school, library, adult education center, or manufacturing facility. Work with a group of classmates or colleagues to construct a hypothetical case study about the development of a career services center for the setting chosen. Use the conceptual frameworks and guides (such as CASVE and ISD) employed in this chapter to guide your work. Outline the results of your work and share them with your class and instructor or team leader.

- Identify a person who has developed a successful guidance or human services program over a period of years. Using the personal case history in this chapter as a guide, interview this person to learn more about the personal commitment and environmental resources needed to develop a successful program.

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CHAPTER 18
DEVELOPING, MANAGING, AND PROVIDING ACCESS
TO CAREER RESOURCE COLLECTIONS[68]

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This chapter applies library and information science best practices and strategies to the design and use of career resource collections. Both libraries and online information have undergone many transformations since the 2004 edition of the CIP theory book, but the basic tenets of developing, managing, and providing access to career resource collections remain relevant. These basic principles offer a basis to expand on current options for identifying and collecting career resources, organizing them for ready access, and facilitating their use for research and intervention. After reviewing this chapter, the reader should be able to (a) identify aspects of developing and managing a comprehensive career resource collection, (b) consider how an organization's philosophy, goals, and objectives influence all aspects of collection development, management, and access, (c) distinguish the complementary roles of practitioner and information resource manager in a comprehensive career collection, and (d) recognize the importance of, and strategies for, career information literacy for both practitioners and clients. The chapter begins with a description of comprehensive career resource collections and continues with an examination of administration of career resources, user access, and research and instruction. The chapter concludes with a chapter summary and recommendations for getting the most benefit from reading the chapter.

Comprehensive Career Resource Collections

The primary purpose of a career resource collection should be to provide relevant, accessible, timely career information to help individuals solve career problems and make career decisions. To accomplish this, a career resource manager must constantly gather, evaluate, systematize, store, retrieve, and update career information. The resource manager may also facilitate access to the collection for both practitioners and clients, and, for comprehensive career resource collections, may require specialized knowledge and training. By the term *comprehensive career resource collection,* we refer to a broad range of career information resources, covering varied subjects that are organized for easy access. A comprehensive collection also provides a variety of media delivery options and is typically staffed as needed by both professionals and paraprofessionals. We should note that in some settings the term "career resources" is used not only when referring to career information, but also assessments, instructional guides and related resources (Sampson & Lenz, 2023). The goal of this chapter is to focus on best practices in managing and delivering career information.

Changes in Career Collections and Libraries Since the 2004 Edition

Prior to the previous edition of this book in 2004, career development resources and services had begun to appear online. While print information in career resource collections continues to be a useful resource for in-person, staff-assisted and self-help scenarios, changes in publisher trends and user preferences have encouraged the availability of online career information. For example, the Occupational Outlook Handbook (OOH) transitioned to an electronic format as early as the 1996-97 edition, followed by O*NET Online (formerly, the *Dictionary of Occupational Titles*), in 1998. A little more than 10 years later, online career information was considered ubiquitous: "The Internet provides relatively easy access to a wide diversity of career planning resources and services, both in a practitioner supported and self-help modes." (Osborn et al., 2011, p. 15). Today, many career resources are published in online-only format, such as the Vault Career Library and American Firms Operating in Foreign Countries

(now included in the resources offered by Uniworld Online, https://uniworldonline.com/content/about-uniworld), while others, such as Chronicle Occupational Briefs, have ceased publication altogether.

A primary challenge for career resource managers today is to help clients navigate the plethora of career information on the Internet, as well as evaluating and managing subscription career databases, online programs and services, and career information and resources on websites. A career service center's website may be the first or only contact a client has with the career resources collection, and every effort should be made to organize information in such a way as to make it easily discoverable and accessible. While promoting in-person services if applicable, the website can become a self-help resource itself, providing career guides, database access, library catalogs, career center services and programs, self-assessments, or links to external career websites. One example is the FSU Career Center's Library, which organizes information on its website in categories related to key aspects of career planning and job hunting.

Several user and access issues related specifically to online career information include an inequality among clients who do not have access to computers and broadband, or those who lack basic computer skills. According to earlier findings from the Pew Research Center, "The internet is a central resource for Americans looking for work, but a notable minority lack confidence in their digital job-seeking skills" (Smith, 2015, p. 1). Consequently, technical skills become a critical part of career development information-seeking behaviors. In addition to providing computers, career resource managers may have to seek out instructional resources on basic computer skills if not providing it themselves.

Beyond basic computer skills, however, even highly computer-literate individuals are using online platforms to improve their competencies and gain experience. Career resource managers can provide information to help clients identify such learning services, whether subscription based or open access. For example, LinkedIn Learning provides thousands of video tutorial courses on topics ranging from writing code to how to prepare for an interview, and Forage features a series of tasks designed to simulate real work experience and gives users opportunities outside the traditional work setting. Similarly, individuals can earn digital badging and micro credentials to demonstrate skill, competencies, or completion of a course or program. For example, Coursera, an online course provider, partners with universities and companies to create educational content on a range of topics from "English for Career Development" to "Data Management for Clinical Research."

Career information providers have become aware of diverse, equitable, and inclusive practices, providing information and resources for clients of all backgrounds, identities, and abilities. Equal Opportunity Publications and Career Communications Group, Inc. are two media companies that offer publications, websites, job boards and career fairs aimed at supporting diverse populations, and the National Career Development Association (NCDA) has curated a list of websites, videos, and programs for special populations at Internet Sites for Career Planning. In addition to diverse populations, career resource collections should provide resources representing diversity in types of work. Due to technology, individuals have increased opportunities for independent work such as freelance, contract and remote employment. According to the McKinsey Global Institute (2016, p. 4), "Independent work is rapidly evolving as digital platforms create large-scale, efficient marketplaces where workers connect with buyers of services". We Work Remotely is an online resource that includes a remote job board and educational content on how to be successful as a remote worker, and libraries now feature books

such as *How to Thrive in the Virtual Workplace: Simple and Effective Tips for Successful, Productive, and Empowered Remote Work*, by Robert Glazer with Mick Sloan (2021), or *Building Virtual Teams: Trust, Culture and Remote Working* (2021), by Catalina Dumitru.

The COVID-19 pandemic accelerated the move of career resources to online formats in response to career centers offering services such as virtual career advising and counseling, online career document reviews, virtual workshops, mock interviews, and virtual career fairs. Strategies to support career professionals and clients through online resources have taken many forms. At the FSU Career Center, some print resources were digitized, while others were updated to include content related to loss of jobs and internships, gaps in employment, re-employment and remote work. Likewise, practitioner materials were also digitized and moved online to allow Career Center staff to access them during virtual career advising and counseling sessions. Even with the return to in-person services, the FSU Career Center has continued to offer some virtual services, including career advising and counseling to accommodate distance learners and community members. Identifying and acquiring career resources to support both in-person and virtual services will continue to be an essential role for career resource managers. Their ability to develop, manage, and provide access to career resource collections will depend upon their collaboration with practitioners as well as careful consideration of a variety of issues.

Questions to Address

The establishment and successful functioning of a comprehensive career resource collection raises some challenging questions:

- How does one design and organize a collection, whether in a physical location such as a library, an online location such as a website, or a combination?

- Where should the collection be situated in relation to career services?

- Who should oversee the collection?

- How can collection developers and managers assure that diversity, equity, and inclusion underlie all aspects of the collection and its use?

- When could instructional and research activities encourage the use of resources in a career collection?

A discussion of these questions and related issues regarding the development, management, and accessibility of a comprehensive career collection is the focus of this chapter. That said, sample career resource collections of various sizes and types are included so that readers can be prepared to function in any collection environment, no matter how complex.

In-person/Online Access to Career Resource Collections

As noted above, career practitioners may deliver services to clients in either in-person and/or virtual locations, using career resources available in either physical and/or online collections. The three types of career assistance levels in CIP theory's differentiated service delivery model—self-help, brief staff-assisted, and individual case-managed (Sampson, et al., 2020)—used to be provided only in person. With widespread access to online information, tools, and devices, these three service levels can be provided virtually as well as physically face-to-face. As noted by Osborn et al. (2011), "today we are seeing career centers and career

practitioners providing real-time services online, and some career websites provide services completely online" (p. vi). Over the course of the recent pandemic, accessing career resources virtually became even more of a priority. While many career information resources are now regularly accessed online, print career resource collections continue to exist as well. In either case, practitioners and clients need guidance in identifying, locating, and using career resources.

In a physical collection, signage and maps can lead information seekers to appropriate resources (Sampson, 2008), whereas in an online collection, users are typically guided by visual design and information structure. Osborn et al. (2011) discussed design issues for online career information centers and offered insights focused on website audience, purpose, and accessibility. Career resources may originate in either print or electronic format and be used to complement either in-person or online services. For example, a resource created by an organization, such as a guide to writing a cover letter, may be in print format onsite and/or online via a website. On a website, two basic options exist for providing resources. The first is to create an accessible PDF file that is identical to the version available onsite, where individuals are encouraged to read the resource guide, possibly print it out, and bring it with them to use in an in-person consultation. The second option is to adapt the initial paper document for the web into some sort of content management system such as LibGuides. Two sites using this type of content management system are the New York Public Library's Cover Letter and Resume Guides and Clovis Community College's guide Career Research: Write a Cover Letter. These guides have links to internal organizational resources and external websites that have been judged to provide quality assessment or information.

Whether the practitioner-client communication takes place in synchronous (real-time) or asynchronous (delayed) mode, and whether in-person or online, both participants will benefit from well-organized resource collections that follow universal design principles to maximize their usability (LaPierre, 2021; Story, 1998). Picture a career advisor in a university career center who answers a phone call, chat request, social media comment, or email, asking about advice on cover letter writing. The practitioner can respond quickly with information gleaned from resources available in a physical as well as an online collection, but only if sufficient prior time and energy has been spent on organizing and maintaining the collection in a systematic manner, as described by Epstein and Lenz (2008). Clients as well, especially those using self-help services, can only access career resources easily if they are organized and maintained in a way that meets the clients' needs. Assuring that career resources are accessible to all practitioners and clients according to user needs depends largely on an organization's priorities and action taken by its administrators and career resource managers.

Administration

The primary administrative issues associated with the management of a comprehensive career resource collection include oversight and organization, staffing and human resources, and collection development policies.

Collection Oversight/Organization

A career resource collection's development and management should reflect the goals and objectives of the career services center it supports. The career resource collection can be considered a type of special library, which serves a specific organization or institution (see additional details on the Special Libraries Association website). Special libraries "provide

focused information to a defined group of users on an ongoing basis to further the mission and goals of their parent organizations" (Porter & Christianson, 1997, p. 2). Special librarian John Lapp opined over a hundred years ago that studying the actual problems that face an organization's primary stakeholders and users, collecting resources that address stakeholder and user concerns, and making these resources available and accessible allows information to "function in the work of the institution which it serves" by bringing information to bear "at the right place and the right time" (Special Libraries Association, 1996, pp. 261, 263). Lapp first employed the notion of the rightness of information for special libraries in 1918, and the idea has persisted through the years and in various information disciplines. One example in a 2017 engineering management paper references a 2005 column by Robertson, which stated that the major aim of information management is "to get the right information to the right person at the right place and at the right time" (Ahmed, 2017, p. 35). This goal meshes well with CIP's differentiated service delivery model, which seeks "to provide the right *resource*, used by the right *person*, with the right level of *support*, at the lowest possible cost" (Sampson, 2008, p. 6).

Following the concept of the right place, the location and floor plan of a physical career resource collection are important considerations in the delivery of career information services. The choice might be to locate the collection within or adjacent to a main library, such as a career collection in a public library, where it can be directly supported by the existing library staff and services. Collections equally might be placed in the heart of a career center, and may or may not be called libraries, resource centers, or other names. Regardless of its name, Sampson (2008) argued that the "resource room needs to be a clearly designed place for the adolescents and adults that are being served" (p. 33). The collection's physical layout ideally will also provide easy access to different types of resources, which should be located on shelves, in carrels, on tables, and so forth to facilitate their use. For example, in the University of Nevada, Las Vegas Libraries, Grays and Tucker (2020) found that locating print career-related monographs together on easily accessible, visible shelves led to twice as much circulation for the career collection as that for the general books.

Concerns such as providing space for the changing balance of print and multimedia resources, accessibility to resources for people with disabilities, and proximity of staff offices to the collection must also be addressed when deciding on a floor plan. Sampson (1999) provided an overview of design considerations—including furnishings, environmental concerns and equipment—which may be helpful in planning effective facilities. Several books (Dancik & Shroder, 2011; Epstein & Lenz, 2008; Kreizman, 1999; Sampson, 2008; Schutt, 2008) also contain practical guidelines and/or floor plans for planning physical career resource spaces. Reviewing sample floor plans may also generate ideas and images for developing a unique layout to support institutional goals and objectives. For example, the Florida State University (FSU) Career Center has featured two library floor plans since 1994; the first allowed easy access for self-directed use and supervised groups such as classes, and the second one was designed specifically in consideration of "user needs, program areas, and 'traffic flow'" (Epstein & Lenz, 2008, p. 23).

The role that a career resource collection plays in a career services center depends on the nature of the center and thus may vary greatly. Representative staff members from throughout the career services center can provide vision and direction for developing and managing a comprehensive career resource collection. A collection team, or committee, may be formed to create or review collection goals, objectives, policies, and procedures. This diverse group, in

addition to its advisory and/or administrative function(s), can also serve as a liaison between collection personnel and the overall career services center. At the FSU Career Center, a library committee has determined policies to review the collection and has recommended resources or types of resources to improve the comprehensive nature of the collection. Past activities of the committee have included creating a website collection policy and reviewing professional collection resources. The librarian originally chaired the committee, then subsequently another staff member performed that role to allow the librarian to function as a consultant. Currently, the librarian again chairs the committee, which is officially called the Library & Information Resources Committee. Representatives from at least one member of each Career Center team/department in the Career Center continuously evaluate external online resources and review any prospective new resources, print and online. The committee also provides some staff training in a limited capacity.

If career resource centers do not maintain comprehensive, career resource collections such as the one at the FSU Career Center, they may choose to collaborate with external managers/providers of career resources. Several types of higher-education collaborations between career services and libraries exist, for example:

1. The Career Education Center at Simmons University and the Simmons University Library have made career resources available to users since the 1980s. According to the University Archivist & Deputy Director at Simmons University Library (J. Wood, personal communication, August 3, 2022) and the Library Service Desk (M. Rahal, personal communication, August 3, 2022), various library entities have housed career resources for the Simmons community, including the Career Resource Center, the Miller/Knopf Career Resource Library named in 2002, and currently, the Careers Collection. This collaboration can be seen with online resources as well, in the Library's [Career Guides] and over 1500 e-book offerings on topics such as vocational guidance, career development, and job hunting, with a date range from 1886 to 2022.

2. At Florida International University, The Hubert Library and the [career services department] collaborated to provide additional career research assistance to students and alumni through a series of workshops focused on career resources and an online library career resource guide. The collaboration was documented in an article written by the librarian involved (Lafferty, 2019), and the most long-lasting outcome is the online library guide with resources that address the full career planning process.

3. Another university partnership between the library and career center at Fresno State consisted of "a series of outreach and instructional services" (Pun & Kubo, 2017, p. 135). These services appear to be currently offered by one of the librarians in the form of workshops and an online library guide, with an emphasis on business majors.

4. Lorenzen and Batt (1992) described how the Career Center Library at Indiana State University (ISU) reached out to the ISU Libraries for advice on how to manage their collection, and this resulted in the career resource materials being incorporated into the main library's catalog. At present it appears that the Indiana State University Library maintains career resources and provides access through their online guide called [Career Resources at Indiana State University].

Human Resources Management

To effectively provide career information services, three roles are generally required: (a) career practitioner, (b) resource manager, and (c) technical assistant. Due to the different level and type of education required for each role, and depending on the size of the service, these roles may be performed by one or many staff members. For example, a comprehensive career resource collection would ideally be managed by an information professional—who could be a professionally trained librarian—in collaboration with one or more career practitioners. To accomplish technical and access objectives, the information professional would also ideally have an assistant to help clients locate resources, answer basic questions about the collection and process collection materials. However, in some cases, these tasks can be done by paraprofessionals, and that topic is discussed further in the next section.

Paraprofessionals can also be used extensively in comprehensive career centers and career libraries (Lenz & Panke, 2001). In colleges and universities, paraprofessionals may include graduate interns and assistants from counseling or student personnel training programs or undergraduate students with a variety of majors. Epstein and Lenz (2008) provided insight into paraprofessionals in higher education career resource settings, including a sample job description. The training and supervision of paraprofessionals varies greatly depending on the setting where they are used. For example, paraprofessionals at the University of Missouri-Columbia Career Center receive over 100 hours of training, (https://career.missouri.edu/about-us/paraprofessionals/). Axelrod, et al. (1977) discussed a differentiated staffing plan for a career resource center, including descriptions of professional, paraprofessional, and clerical staff positions. The reader may also wish to review the paraprofessional training program described by Lenz (2000) in *Paraprofessionals in Career Services: The Florida State University Model, Technical Report 27*, available at: https://career.fsu.edu/tech-center/resources/technical-reports.

Career practitioners help clients make the best use of information to solve career problems and make decisions. Sometimes the career advising/counseling role overlaps the information professional/librarian role, especially when an information search interacts with the counseling process (such as the clarification of career planning problems and issues). Sometimes the information professional/librarian role overlaps the counseling role; for example, in many public libraries, employment information and assistance are available to adult patrons who are victims of structural unemployment caused by the decline of some industries. Do information professionals offer career self-assessments to unemployed patrons who want to find out how their interests might relate to new career fields in demand? What about self-help books or computer-assisted career guidance systems available in some libraries? These issues raise complex questions about the appropriate functions of information professionals and career practitioners in the career services area, and they also draw attention to the need for organizations to develop policies that clarify distinct and overlapping professional responsibilities.

Librarians and other information professionals are specifically trained to manage information and resources, including specialized collections in career resource centers. They are experts in setting up systems to help people locate and retrieve information that meets their decision-making and research needs. A comprehensive career resource collection, which supports the development of career problem-solving and decision-making skills, will likely require the services of a professional librarian. This assistance may be in the form of periodic review of the service or, in some cases, the employment of a full-time, professional librarian. As

the scope of a career services center increases, in terms of either function or resources (or both), there is a greater need for the specialized role of a librarian. The more career practitioners are required to assume the resource manager role, the more they should consult a professional librarian when creating a career information system.

Career practitioners and information professionals each make unique contributions in offering comprehensive career information services; and where both are present in the organization, collaboration is essential. On the one hand, the information professional role focuses on technical procedures for acquiring, cataloging, arranging, updating, and evaluating the career information materials in the collection. They also assist clients in locating and retrieving information through instructional and research services. On the other hand, the career practitioner role calls for helping clients use information for solving career problems and making career decisions. Thus, in comprehensive career resource centers, the roles of information professional and career practitioner are often complementary.

There are several practical reasons for career practitioners and information professionals to collaborate in organizations where they work in separate areas of service. One common area of collaboration is the monetary challenge of acquiring career resources. For example, public schools and colleges typically budget special or categorical dollars expressly for the purchase of library and media materials, and if these funds are earmarked for expensive books (print or digital), videos, computer software, or subscription services, a portion of these could be allocated for career resources. Epstein and Lenz (2008) provided a detailed treatment of budget issues and funding sources for career resource collections, and Levenson and Hess (2020) describe a strategy known as collaborative collection development among academic libraries that could be modified and adopted for career resource collections. Another area of collaboration could be in client services, where the complementary work of career and information professionals may increase the use of career information resources in both types of services. Some schools, especially community colleges, have located their career services program, including staff offices, in buildings that house the college library. In these situations, the career library exists as a subunit of the larger library, both sharing the same budget allocation as well as service provision. Because libraries are designed to serve many persons at once, frequently offer evening and/or weekend hours, and have procedures in place to allow access to materials and prevent their loss, they can provide a convenient, user-friendly place for clients to access career resources. One example of a community-based collaboration between career and library services may be seen in the partnership between Capital Workforce Partners and the Hartford Public Library in Connecticut. As described in a 2012 article, two CTWorks career agents were placed in the main library to take advantage of the library's "citizenship resources, language classes, and digital literacy help." The partnership (https://capitalworkforce.org/partners/) continues to this day; the list of locations includes the Hartford Downtown American Job Center Satellite; AJC@HPL Hartford Public Library, as well as resources dedicated on the library's website for job seekers. (https://tap.hplct.org/job-seekers/)

Chapter 2 discussed CIP theory's pyramid of information processing domains in career decision-making processes, and it follows that information professionals can be of special assistance in helping individuals with organizing information about career options. In CIP theory (Sampson et al., 2020) terms, they can help develop schemata in the respective knowledge domains. Additionally, information professionals may help foster the development of problem-solving and decision-making skills. Career practitioners and information professionals should

cooperate to integrate the career information search with the development of self-knowledge, options knowledge, decision-making skills, and metacognitions. Thus, the information processing paradigm can serve as a framework to describe the respective functions of information professionals and career practitioners in comprehensive career resource collections.

Orientation and training of personnel who provide career information and resources, whether paraprofessionals, career practitioners, information professionals, or technical staff, must be thorough and continuous to provide the best service possible. Depending on the number and type of resources and organization systems used within the resource collection, staff development activities will require time for effective learning. Orientation and training activities should be hands-on, reflect realistic staff-client interactions, and help the staff become as self-sufficient as possible. Developing one or more training and procedure manuals and job aids can document staff development activities and increase consistency in providing effective services.

Career resource managers, due to the changing nature of both information resources and the career development field, should devote substantial time to professional development activities. These include continuing education courses that help a career resource manager keep up to date with new technology and identify helpful tools for the management of career resources. Belonging to professional associations, such as the National Career Development Association (https://ncda.org/aws/NCDA/pt/sp/home_page), Special Libraries Association (https://www.sla.org/), or American Library Association (https://www.ala.org), allows managers to discuss pertinent issues with networks of other professionals. Professional associations also offer resources, workshops and conferences, with many in online formats.

Collection Development

Career resource collections may vary greatly from organization to organization, depending on the clients served, and may be physical, online, or a combination of the two. Having a collection development policy or guidelines provides a plan for effectively meeting the information needs of clients and allows career resource managers to make decisions that truly carry out a career center's mission. Osborn et al. (2011) noted that smaller organizations may only need collection development guidelines, whereas larger organizations may need more formal documents. Guidelines for creating collection development documents, as well as a sample collection development policy, are described in Epstein and Lenz (2008).

Also known as collection management or information resources management, collection development assures "high-quality information resources of print and non-print materials" and "access to electronic resources that will meet institutional needs" (Uziel, 2017, p. 102). Collection policies or guidelines should be unique, reflecting clientele and institutional philosophies. For example, the FSU Career Center's collection development policy states that the non-circulating, self-help career resource library is open to community members as well as students. Policies and/or guidelines should detail subject areas and formats collected, and articulate who selects which resources, what kinds of resources are selected, and for whom they are selected (Coughlin & Gertzog, 1992). Details on collection maintenance and timetables for a periodic and systematic evaluation and review of resources in the collection will guide career resource managers' decisions to retain or weed/discard materials. Conducting an inventory of what resources are current, out of date, and in need of replacement is part of this process.

A written policy can help ensure that consistent criteria are used to develop and maintain resources so that the needs of the users are effectively met (Coughlin & Gertzog, 1992; Epstein & Lenz, 2008). Resource managers may have to decide on the types and balance of published materials, guides and other "in-house" resources to include in the collection. They also need to consider the nature of resources: Are they free or open access? Does the organization own items or have subscriptions? Are physical items only used on-site, or can they be loaned to clients? Should clients pay independently for specific resources? Factors to consider in the collection of materials for a career resource collection are described by Brown (2014), and the National Career Development Association (NCDA) provides additional guidelines on the Standards section of its website. Criteria to consider for evaluating online career resources can also be found in Osborn et al. (2011).

User Access: Practitioners and Clients

We continue our exploration of issues associated with the operation of career resource collections by focusing on the processes that give clients access to career resources. These activities include the acquisition, classification, and use of career resources: following a collection development policy or guidelines, employing a systems approach to categorizing resources, and using evidence-based methods for resource circulation, instruction and research. The needs of diverse practitioners and clients underlie these activities to ensure equal and inclusive user access.

Acquisitions

The acquisitions process involves collecting, discarding, and updating print, multimedia, and/or online resources. Acquiring resources follows and puts into practice an institution's collection development goals, evolving as institutions become "increasingly collaborative and technology driven" and in response to "changes happening in research, teaching, and learning" (Uziel, 2017, p. 109). The policy or guidelines can inform career resource management acquisition activities and provide continuity of service by guiding future career resource managers. Resources may be collected in a multitude of formats based on the subject area, scope of the collection, and client preferences. They may be free, given as gifts, or purchased. The choice of medium, e.g., print, multimedia and/or online, involves decisions about the type of equipment purchased for the library and the populations served.

Aside from handling the continuous stream of resource requests from clients, career practitioners, and other staff, the career resource manager must replace missing items and order new editions (where available) of frequently used resources. The resource manager must address many issues. For example, in an educational setting, the resource manager might consider the following: What areas of study are offered at the university or college where the career resource collection is located? What items are heavily used and frequently requested? Where are the gaps, if any, in the collection? What formats are needed? What balance is needed between print and online resources to best serve the needs of target users? What is the most affordable means to gather resources? Ideally, a task force of staff and career practitioners may address questions like those mentioned above. As part of the acquisitions process, decisions must be made about who will help select new resources and determine the best sources for locating relevant materials. All staff can be involved in acquiring career information from miscellaneous sources, such as newspaper and magazine articles, job openings and descriptions, information interviews, or

employer literature. Once materials have been identified, the next step is to evaluate their appropriateness for inclusion in the career resource collection. Evaluation is a critical step because clients generally expect to find accurate, current, accessible and comprehensive information in a career resource center. Reviews of career materials in various professional publications—and in some cases, online "bookstores"—can be a valuable resource for career resource managers.

Evaluating career materials involves the application of professional standards to the selection of career information, as well as input from career practitioners and clients. Circulation statistics, user surveys, and on-site studies can give the career resource manager valuable information that can help inform decisions. The National Career Development Association (NCDA) (2001a) (2001b, 2001c) provides both general and content guidelines to evaluate career and occupational information, as well as guidelines for evaluating multimedia resources. Their Internet Sites for Career Planning website illustrates NCDA's curation process, and lists the guidelines used to include resources. Career information that does not meet professional standards should be used with caution.

When ordering materials, a career resource manager checks to see whether a resource is already in the collection, then determines the most recent available edition of the item and which vendor can supply it. Coughlin and Gertzog (1992) recommended that small libraries find a vendor for bulk orders because it is less time-consuming and expensive, rather than ordering resources through many different providers. For example, at the FSU Career Center Library, books have most recently been ordered through the university's purchasing system via Complete Books and Amazon Business. It is also useful to identify publisher or career websites that create recommended book lists and sign up for email programs, especially as few, if any, career resource publishers still have print catalogs of their resources. For instance, Penguin Random House maintains a list called "The Book List to Kickstart Your Career," and performing an online search of career booklists is another way to discover publisher reviews and recommendations. Maintaining a spreadsheet of in-house publishers, organized alphabetically by publisher name and/or by specialty topics, such as occupations, job hunting, or industry may be a useful way to track new resources and to update previous resources.

Equally helpful, especially for collections not part of a large library system, may be a specific spreadsheet file for managing ongoing subscriptions and one-time orders. Managers can verify the status of orders, track renewal dates for subscriptions, and maintain costs within a certain budget. Subscriptions in a career resource collection may be in the form of newspapers, magazines, or directories. On-line subscriptions will likely require some type of user authentication; a policy on how to handle these types of resources can assure providers that only those affiliated with the career resource center have access to their service. When deciding whether to order a print subscription, obtaining a sample issue can be very informative. Once received items or subscriptions have been confirmed and recorded, they are ready for integration into the collection.

Classification

Once resources have been acquired, they should be integrated into a collection that has been organized for practitioner and client access. Using some type of information management system can provide the structure necessary to keep track of the collection and ensure the availability of a resource. To be most effective, the information system should incorporate a

classification scheme, or taxonomy, that categorizes resources to meet the needs of the collection's targeted clientele. A subject-matter classification can facilitate access for information seekers, who expect materials on a particular topic to be grouped together. A thorough discussion of career-information taxonomies may be found in Epstein and Lenz (2008).

Classification schemes should do two things: (a) guide users to where resources are located and (b) convey, in general terms, the content of the materials. Career resources may be classified according to Library of Congress or Dewey subject headings if they constitute part of a large library collection; however, if they form a special collection, the arrangement may be by Holland codes (Holland & Messer, 2017), college majors, or a homemade subject-categorization scheme. Classification schemes must describe the contents of resources in a way that enables clients to determine if the resources relate to their career decision-making concerns. The choice of scheme depends on the amount and breadth of information to be included in the collection; the types of persons who will access the information (client or practitioner), and the career center's approach (self-help versus practitioner assistance). A career center that emphasizes self-help services requires a more sophisticated classification scheme than a career services center that emphasizes counselor-client relationships, where career practitioners actively guide clients to the resources.

Appendix J provides a historical perspective on career information schemas, as well as a sample classification scheme first developed by the FSU Career Center. Called Career Key, the taxonomy features six main categories and numerous sub-categories of career information, representing a comprehensive career resource collection.

Systems Approach to Access

Career practitioners and their clients need ready access to information resources to make knowledgeable career planning decisions. Employing a systematic approach to make resources accessible requires spending time upfront to identify practitioner and client information needs, brainstorm and test possible solutions, and document viable processes. The more time spent organizing and maintaining resources prior to use, the less time will be needed to identify, locate, and research information needed to make informed decisions. Epstein and Lenz (2008) offered a detailed example of a practitioner-client interaction where systems facilitate successful access to career information, illustrating that "Systems can provide consistency and standards for many types of procedures and organizational schemas." (Epstein & Lenz, 2008, p. 17).

Whichever type of organizational schema for career information is used, a comprehensive career resource schema ideally reflects the process of clients learning about themselves, the world of occupations, education and training, experiential opportunities, job hunting, and potential employers. For an online career resource center, Osborn et al. (2011) listed websites in categories that also reflect career exploration, future planning, and searching for employment and training prospects: self-assessment, career development process, occupational information, employment trends, salary information, educational information, financial aid information, apprenticeship/other training programs, job searching, military service, and researching employers. Similarly, the National Career Development Association uses eight broad categories as part of their listing of Internet Sites for Career Planning. Career resource collections of any size, either in person or online, can benefit from being organized into broad categories, such as the physical design of the FSU Career Center's library as described in Epstein and Lenz (2008), and the library's web career resources collection, available at Career Center Library. Depending

on diverse client needs, the broad categories could then delve into appropriate specialty area(s) of career resources. For example, at the FSU Career Center, occupational content gets further categorized and organized by using the Standard Occupational Classification (SOC) system (U.S. Bureau of Labor Statistics, 2018). Using SOC codes to organize occupational information maximizes browsing in career fields, which would be impossible in an alphabetical arrangement of resources.

When an item becomes part of a career resource collection, a series of events must occur to ensure its availability to users, and cataloging is the process by which brief descriptions of materials are developed to provide access to them (Coughlin & Gertzog, 1992). "Each time a resource is received, it must be checked against existing cataloging records to determine if the resource is already in the collection" (Epstein et al. 2003, sec. III.A.3). If no record of the resource appears, then a new record is created. If the resource is a new edition or version of something already in the collection, then changes or modifications are made on the preexisting record. Each record in a collection, containing an item's description, or metadata, must consistently follow standard rules for processing. This record of information may be stored in print format, but most resource collections today are made accessible through electronic and/or online system records.

Describing a resource through the cataloging process focuses on two basic types of information: (a) the physical characteristics of an item and (b) its intellectual contents. The first step in the process, called descriptive cataloging, documents the item's attributes such as author, title, edition, copyright date, publisher, place, price, format/media, number of copies, volumes, and general location. The second step in the process of cataloging is classification: indexing or assigning categories from a classification scheme to a resource, based on its subject contents. In the online data world, the term metadata management is used for the process of describing an item's characteristics and contents for a particular collection. For physical resources, classification "also refers to the process of assigning a resource a call number, which gives it a unique location within the collection" (Epstein et al., 2003, sec. III.C.2.a). Coding resources with call numbers serves two principal purposes. Because call numbers are based on a classification scheme, they allow resources to be arranged according to subject area. They are unique identification codes as well, and allow for fast, accurate access of resources in a database or on the shelves (Epstein et al., 2003). Not all career collections use a formal and comprehensive classification scheme, preferring to organize their resources with color codes, in alphabetical order, or by another general system. Therefore, they may not use call numbers to physically locate materials. Sampson (2008) described a color-coding system for a career resource room, as well as other considerations for a physical resource collection.

A resource's descriptive and classification data, recorded in standardized format, function as a surrogate for the physical or online entity. For many years, the surrogate was physical catalog cards; currently, the standard is to use an electronic or online database. Each electronic or online record in the database represents one career resource and its related metadata. This allows for many access points to potentially relevant information for a client's career problem solving and decision-making. In general, the access points clients may search by are title, author, subject, or format. The use of resource surrogates in a database is vital to maximize access to information and should be considered essential in the development of a comprehensive career resource collection.

Electronic or online databases, as well as websites, offer keyword searching, which can be very useful for both practitioners and clients. Terminology for occupations and other aspects of career information evolve over time; for instance, if appropriate resources on *guidance counselors* cannot be found, a keyword search using an alternate term, such as *school counselor*, will likely be successful. Keyword searching is also a good tool to use if clients remember only a word in the title or part of an author's name. Having a user-friendly database system with features such as keyword searching may be an important factor in enhancing self-help activities in the career resource collection.

Factors to consider when developing systems for access to career resources include the overall design and maintenance procedures to maximize information retrieval. The design, whether simple or complex, should support the unique career resource collection and those who will be accessing it. As mentioned earlier, a self-help center will require self-directed learning support for accessing career resources, whereas a practitioner-assisted model may only require that the practitioner understand how resources are organized. Regardless of the design, maintaining resources so that current, reliable information is available can be time consuming and is best accomplished through systematic processes. Epstein and Lenz (2008) provide an extensive description of the systems needed to evaluate, acquire, update, and delete career resources.

Research and Instruction

Information professionals connect clients or practitioners in need of career information with resources wherever they may be located (Bopp & Smith, 1995; Fraser-Arnott, 2015; Martin & Hinchliffe, 2020), and make career practitioners aware of new resources that come into a collection. They provide this connection by conducting reference interviews, creating user finding/retrieval tools, and providing instruction sessions (e.g., workshops) or consultations. These activities assist career practitioners by modeling how to find information (Reardon, 2020) and involve the client as much as possible in the research process. Information professionals may ultimately provide a framework for clients to seek out information independently, by focusing on teachable moments that model effective information seeking behaviors and promote active learning (Oakleaf & VanScoy, 2010). For example, an information professional can provide a "think aloud" approach that verbalizes the steps in the search process, making it transparent to users. Information professionals can "let users drive" by allowing them to try something just demonstrated to them and by sharing tips and tricks that have worked in the past (Oakleaf & VanScoy, 2010, p. 384). Put simply, the information professional's role is to teach information literacy, "the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning" (Association of College and Research Libraries, 2015, p. 8). This encompasses the options knowledge domain in the Pyramid of Information Processing (Sampson et al., 2020). Through the client reference interview, the information professional helps identify the career information a client needs.

The first step in this process can be likened to identifying the gap in the Communication phase of the CASVE cycle, where "effective listening and questioning skills are necessary for a positive interaction" (Sampson et al., 2020; Reference and User Services Association (RUSA), 2008/2013). Many of the skills a career practitioner uses in the client interview process also apply in the context of a reference interview, including "effective questioning and active

listening" (Mahoney, 2009, p. 63). Sometimes, clients' questions are clear, and they merely need to be directed to a particular resource. In some cases, however, clients may find it difficult to properly articulate their information requests. The interview can help determine the context of the question (why the question is being asked), format, quantity, prior search history, and level of information that is needed or preferred from the client (Bopp & Smith, 1995; RUSA 2008/2013). An information professional clarifies, paraphrases, or summarizes information back to the client to further understand what the client needs (RUSA 2008/2013). Following up or asking clients if they "are satisfied with the results of the search" and by offering referrals to other practitioners if needed (RUSA, 5.0 Follow-up, 2008/2013) can be useful to close a reference interview. If the gap has been identified as a lack of career information, the reference interview can help further clarify what information is needed. Information professionals may also help clients secure career information throughout the entire CASVE cycle.

To help clients and practitioners better locate, understand, and utilize information and resources, information professionals frequently create and use tools and workshops. Finding and retrieval tools often provide the foundation for a self-help collection and encourage self-help interventions for clients (Reardon, 2017). They create structure and access to many different types of information and may include guides/handouts, cross-reference lists, bibliographies, web pages, e-mail, and signage. For example, a guide on researching employers may give someone a schema for what kinds of information to look for related to a specific type of organization. A cross-reference list may help a client understand how information about government agencies and departments is organized. Workshops, online tutorials, or learning management systems modules may be developed to teach clients how to acquire effective search skills or how to evaluate career information. "Helping an individual understand the organization and use of the library's collection is the oldest and still most commonly practiced form of instruction" (Bopp & Smith, 1995, p. 12).

Higher education academic library information professionals can also collaborate with campus career centers to provide outreach and instructional services, and subject librarians who serve academic disciplines across campus can be an information resource to students in their own discipline of study (Pun & Kubo, 2017). For example, a subject librarian in psychology can partner with the career center to provide access and teach skills for searching psychology online databases and resources to help students obtain information at any stage of their career development. Campus libraries provide a vast number of databases and resources, and the subject librarian can help clients locate information of interest at the beginning of their job search exploration by using newspapers, trade journals and related publications to look for current job announcements and employer information. Subject librarians can be attuned to when a client appears caught in an endless loop of information analysis and harvesting, or when information is overloading the individual. As a career center partner, the subject librarian can then refer the individual back to someone at the career center with the expertise to assist the client in moving forward in their decision-making process (Carr & Epstein, 2009; Epstein & Lenz, 2008).

Information professionals, whether they work in a resource center or in another capacity in an organization, are equipped to teach digital literacy for lifelong learning. Digital literacy skillsets include how to access, manage, evaluate, and integrate online career information (Pavlovich, 2021), and clients need guidance to evaluate career information to determine its purpose and relevancy to their needs, as well as its currency, accuracy, and whether the source is

reputable (e.g., *OOH*, career center website, *New York Times*). Teaching clients how to check career information on websites that may not be reputable resources is more critical than ever. Caufield (2017) offered four moves to consider teaching clients: 1) "Check for previous work": there may be others who have done the leg-work of verifying the information or who have synthesized it; 2) "Go upstream to the source": if it is a secondary source, encourage clients to find the original source; 3) "Read laterally: Once [clients] get to the source of a claim, they can read what other people say about the source (publication, author, etc.). The truth is in the network."; 4) "Circle back": if they were not able to verify and got lost in the information vortex, it might be time to have them reassess what they learned about the career information (i.e., return to the Communication phase of the CASVE cycle). Instructing clients on these moves fall under a broader umbrella of digital literacy that will help them navigate the vast amount of digital career information they encounter no matter where they find it (whether on social media, blog posts, or other non-educationally based sources).

Chapter 18 Summary

This chapter has addressed the main points of developing, managing, and providing access to comprehensive career resource collections. Both the background of career information systems and examples of various sizes and types of career resource collections have provided the reader with an overview of possible collection configurations. Whether supporting in-person or virtual career services with either physical or online career resources, the basic tenets of resource administration and access for practitioners and clients have remained constant. Through a systematic approach to developing and managing career resources, as well as timely and appropriate research and instruction services, information professionals can effectively and efficiently meet the needs of career resource collection users.

Getting the Most Benefit from Reading Chapter 18

To effectively learn the material in this chapter, complete one or more of the following activities:

- Visit a career services center online and determine if their information resources are organized into a collection. Identify a career planning topic or occupation of personal interest to you and conduct a search of all available materials. How easy is it to access information? What kind of classification system, if any, do they use?

- Familiarize yourself with the U.S. government's Standard Occupational Classification system and view its general structure at the Bureau of Labor Statistics' SOC website (https://www.bls.gov/soc/2018/home.htm). Identify three occupations of interest to you and find them (or their nearest equivalent). How easy is it to navigate the website?

- Interview a career practitioner or information professional about how they help people locate, retrieve, and use career-related materials (career information literacy). Use the topics in this chapter as a guide in developing your interview questions. Note the skills, systems, and approaches they use, and decide which aspects to add to your skills set.

- Assume you are the assistant director of a career services program in the setting of your choice. You have been given $5,000 to establish or upgrade a career resource collection. Determine the clients you need to serve and whether your services will be in-person,

online, or a combination. With this information, make decisions on which resources and in which format(s) will meet your staff and client needs.

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Appendix J
Historical Perspective on Career Information Systems
& A Sample Comprehensive Classification Scheme

Continue on the following page.

From: *Cognitive Information Processing: Career Theory, Research, and Practice*,
Chapter 18 (https://doi.org/10.33009/fsop_sampson1123.ch18).

Historical perspective on career information systems and
A sample comprehensive classification scheme

The Career Information Knowledge Base

When Frank Parsons developed the Vocations Bureau in Boston in the early 1900s, he spent considerable effort trying to classify industries to help young persons have a better understanding of the world of work. Parsons (1909, p. 65) listed the following categories:

1. Agencies and office work
2. Agricultural
3. Artistic
4. Commercial
5. Domestic and personal service
6. Fishing
7. Manufacturing
8. Mechanical, building, and construction
9. Professional and semiprofessional
10. Transportation
11. Miscellaneous industries

He noted that these categories were not fixed and would probably change over time. This view was indeed prophetic -- scores of other classifications of industrial, occupational, and career information have been created since 1909. These efforts have sought to help people understand the nature of the labor force and ultimately to use career information for more effective career problem solving and decision-making.

Since the 1970s, the U.S. government has developed numerous distinct classification systems, based on unique data, for economic planners and researchers. Government classification schemes have included the Census Code, Classification of Instructional Programs (CIP), Dictionary of Occupational Titles (DOT), Guide for Occupational Exploration (GOE), Occupational Employment Statistics (OES), Standard Occupational Classification (SOC), the Standard Industrial Classification (SIC), and the North American Industrial Classification System (NAICS). These separate systems discouraged information sharing among government agencies for many years, but crosswalks have been developed and/or are being utilized by organizations such as the Analyst Resource Center (ARC) https://www.widcenter.org/arc/ and the U.S. Bureau of Labor Statistics' Employment Projections program (EP) https://www.bls.gov/emp/documentation/crosswalks.htm. Many of these crosswalks may also be accessed at the classification systems government websites. Nongovernmental classification systems developed since the 1970s include the Higher Education General Information Survey, Holland Codes, the Worker Trait Group Guide, and the World-of-Work Map, and the National Crosswalk Service Center has cross-referenced some of these classification systems to the SOC and NAICS (Acosta, A., 2018).

Selected Occupational Classification Systems in Use Today

- Standard Occupational Classification (SOC) (U.S. Bureau of Labor Statistics, 2018): The SOC system, to be utilized by all federal statistical agencies, classifies workers into occupational categories for collecting, calculating, or disseminating data. Organized into categories by similar job duties, skills, education, or experience, the SOC contains over 850 occupations. The Occupational Information Network (O*NET) utilizes the SOC structure to provide information on over 950 occupations. Originally, the O*NET was designed to update and replace the 1991 version of the Dictionary of Occupational Titles, which classified over 12,000 occupational titles. The Occupational Employment Statistics uses the SOC structure to provide information on staffing patterns and projected employment in U.S. industries and occupations.

- Classification of Instructional Programs (CIP) (U.S. Department of Education, 2020): The CIP taxonomy classifies instructional programs in two-digit, four-digit, and six-digit codes. In addition to other Department of Education offices, the CIP has been used by other federal agencies, state agencies, national associations, academic institutions, and employment counseling services.

- Holland Codes (Gottfredson & Holland, 1996; Holland & Messer 2017): Holland codes focus on the work environment to classify occupations, using the RIASEC typology based on Holland's theory of vocational choice. The six types are Realistic, Investigative, Artistic, Social, Enterprising, and Conventional, combined into three-letter Holland codes, then cross-referenced to other classification systems.

- North American Industry Classification System (NAICS) (U.S. Census Bureau, 2022): The NAICS classifies business establishments by type of product or service and covers the entire range of economic activity. It is a numerical, hierarchical coding system that replaces the Standard Industrial Classification (SIC) system.

Using one or more of these classification systems to manage occupational information in a career library allows the resource manager to relate local resources easily to state or national information and integrate published materials seamlessly into the local collection. In addition, a professional classification system provides more validity than a homemade one. Determining which specific system to use might be based on factors such as the needs of the local setting, the philosophical principles of those in charge of the career information system, and the size of the library collection. Another factor may be the classification scheme's level of interoperability-- that is, the extent to which it has been cross-referenced to other systems. Some career development professionals suggest using the three-letter codes developed by Holland, which apply to approximately 1,300 occupations identified in the *Occupations Finder* of the Self-Directed Search (Holland & Messer, 2017) and ultimately to the entire *Dictionary of Occupational Titles* (DOT) (Gottfredson & Holland, 1996). The limitation with this system is that the retrieval of information may be unwieldy. For example, if a career center had only three pieces of information for each of the 45 RIE occupations in the *Occupations Finder,* users would have 135 pieces of material to search through when looking for a specific RIE occupation.

A Comprehensive Classification Scheme

Despite the preponderance of industrial and occupational classification systems, the career development process comprises much more than researching industries or occupations and

requires a more inclusive scheme for conceptualizing career information. Librarians and career counselors have struggled since the 1940s to develop classification schemes for cataloging career information materials. Around 1968, career guidance, which had been concentrated in high schools, began to appear more prominently in college and university settings. In these new settings, the emphasis was not only on occupational information but also on career decision-making, employability skills, women in the job market, and self-awareness. Peterson et al. (1991) provide more detailed information on the evolution of career classification schemes.

In addition to classification schemes, practitioners acknowledged that the presentation of career information needed to go beyond the traditional collections of clippings, pamphlets, catalogs, books, and homemade index-card filing systems. Career resource managers, therefore, developed various ways to organize resource libraries, depending on the nature of the collection and the expertise of the manager. Green (1979) explored the issues involved in developing an independent library system for organizing and retrieving career materials. She noted that three factors make information readily accessible to users: (a) form, or the type of medium used (b) location, and (c) content. These three factors should be considered in designing a career library so users of the systems can, with minimal assistance, identify and locate the information that meets their needs. Using a subject-matter classification can facilitate access for many information seekers, who browse collections and expect materials on a particular topic to be clustered together. Classification schemes should do two things: (a) guide users to where materials are located and (b) convey, in general terms, the content of the materials. Career resources may be classified according to Library of Congress or Dewey subject headings if they constitute part of a larger library collection; however, if they form a special collection, the arrangement may be by Holland codes, college majors, or a homemade subject-categorization scheme.

Classification schemes must describe the contents of resources in a way that permits clients to ascertain if the resources relate to their career problems. Content can be conveyed two ways in the classification scheme: (a) notation, where numbers and/or letters reference certain subjects; or (b) terminology, where keywords or standard phrases indicate a subject-matter domain. The advantage of using a classification code rather than a subject-heading system is that it eliminates problems of syntax, semantics, and synonymy inherent in the English language. Because terminology and classification systems are often in a state of flux, thesauri and subject-heading lists (keywords and phrases describing a field) have been created to standardize the terminology employed in referencing career information. The choice of classification schemes depends on the amount and breadth of information to be included in the collection; the types of persons who will access the information (client, career practitioner, or career resource manager); and the career center's approach (self-help versus practitioner help). A comprehensive career center that emphasizes self-help services requires a more sophisticated classification scheme than a counseling center that emphasizes counselor-client relationships, where counselors actively guide clients to the materials.

To cope with the amount of available career information and to organize it in a useful way for self-help clients, a taxonomy with six broad categories of career information was developed at the Career Center at Florida State University in the early 1980s. The taxonomy, called *Career Key: A Career Library Management System* (Smith, 1983), was revised in 1998 and the name modified to Career Key: A Tool for Finding and Managing Career Resources (see Table 13.2). This career classification scheme considered the local university context and the

specific existing career information delivery system in the career center. The following six categories of career information are housed in this comprehensive university career library:

- Career and life planning

- Occupations

- Education and training

- Work experience

- Job hunting

- Employer information resources

The complete classification system is as follows, with *Career Key Subject Headings and Codes*

I. Career and Life Planning

IA Career Choice (examining interests, values, and abilities)

IB Career Transitions (exploring and adjusting to new work situations)

IC National Job Outlook (employment trends, labor statistics, and salaries)

ID Local/Regional/State Job Outlook (employment trends, labor statistics, and salaries

IE Work Environment (working hours, work attitudes, and job satisfaction)

IF Lifestyle (marriage, leisure time and other lifestyle issues)

IF1 Dual-Career Couples

IF2 Lifestyle Alternatives

IF3 Leisure Time

IG Special Groups (career planning for ethnic and other minorities, older adults, etc.)

IGI Minority Groups

IG2 Older Adults

IG3 Persons with Disabilities

IG4 Women

II. Occupations

IIA Multiple Occupations (resources with information on a lot of different occupations)

IIB Specific Occupations (used with an occupational code)

IIC Occupations by Program of Study (used with a major code)

III. Education and Training

IIIA Training Programs (corporate training programs, apprenticeships, etc.)

IIIB Vocational/Technical Schools

IIIC Colleges/Universities

VIB6 Art, Entertainment, and Communications Employers

VIC International Employment

VID U.S. Employers by Location

VIE Trade and Professional Associations

CHAPTER 19
EVALUATION OF CAREER SERVICES[69]

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This chapter explores evaluation of career service interventions through systematic consideration of their outputs, outcomes, and costs. The chapter also examines the effectiveness of career service interventions, determined by how well individuals acquire self-knowledge, options knowledge, and problem-solving skills, as well as an understanding of metacognitions. After reviewing this chapter, the reader should be able to (a) describe the results of career service

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[69] Content in this chapter was used or adapted from Sampson et al., (2004). Used or adapted with permission.

interventions in terms of primary effects (outputs) and secondary effects (outcomes); (b) provide general information about the effectiveness of career interventions; (c) state the assumptions on which a CIP theory accountability model is based; (d) describe the five factors that determine the effectiveness of career service interventions; (e) describe a method for analyzing costs of career service interventions and programs; (f) show the relationships between costs and effectiveness; and (g) identify four principal requirements to implement a CIP theory-based approach to the evaluation of career interventions. The chapter begins with an exploration of the need for evaluation of career services and continues with an examination of career development definitions, the effects of career interventions, assumptions and propositions of career interventions, the five components of effectiveness, the cost analysis, the requirements to implement CIP theory, the implications of distinguishing between outputs and outcomes, using an implementation model to improve accountability and evaluation, and managing data in practice. The chapter concludes with a chapter summary and recommendations for getting the most benefit from reading the chapter.

The Need for Evaluation of Career Service Interventions

Evaluation is a process that uses systematically collected evidence to "make a judgement about quality or effectiveness – or, in our case, to judge the quality or value of a specific career intervention of interest" (Makela & Rooney, 2012, p. 3). There are two equally important purposes for engaging in evaluation work that assesses the quality of career interventions: accountability and continuous improvement.

Accountability

Accountability is defined as the establishing of responsibility for certain outcomes, given a set of human and nonhuman resources (Crabbs & Crabbs, 1977; Henderson & Shore, 1974; Knapper, 1978; Utami, 2020). Sampson and Lenz (2023) noted that "accountability involves providing evidence of the responsible use of funding to deliver career interventions to individuals in a cost-effective manner" (p. 26). There has been a call for accountability in public education and human service programs since the early 1970s, when the long growth trend in tax dollars that were made available to human services began to level off and even decline. Sometimes managers and public officials use "accountability" as an excuse to make organizational changes of a political nature; at least, employees may view the changes in this way. The National Association of Colleges and Employers (NACE, 2019) lists systematic program evaluation as an essential element of professional practice in order to "support and improve programs, adjust to changing constituent needs, and respond to environmental threats and opportunities" (p. 50).

In spite of the continuing public demands for accountability and the development of some helpful models, there is still a paucity of accountability models for career interventions that would enable practitioners and managers to collect and aggregate data that effectively relate program costs to results. In economic terms, we are still very limited in our ability to link *inputs* (i.e., resources invested in career interventions, expressed in dollar amounts) to *outputs* (i.e., the results of the intervention). However, the reality is that unless we as theorists, researchers, and practitioners can demonstrate such relationships in economically defensible ways, organizations that deliver career interventions may have considerable difficulty in competing for funds.

One major difficulty behind this apparent lack of progress in the development of useful accountability and evaluation models has been the absence of conceptual and operational constructs that define the outputs of career interventions in relation to the costs of delivery. In addition, staff in education and human services settings may find that implementing accountability and evaluation models may be a daunting task given their other responsibilities and the lack of resources (Lenz & Dozier, 2019). This chapter presents an accountability model, based on cognitive information processing (CIP) theory (see Chapter 2 of this book), that seeks to define more clearly the products of career interventions so that we as practitioners may develop more precise linkages between the resources invested in our services and the resulting products. In this way, we can increase the effectiveness and efficiency of the services and better document evidence-based practice.

Continuous Improvement

Continuous improvement involves three elements: goal, attitude, and process (Sampson, 2006). As a *goal*, continuous improvement creates an organizational culture that reinforces practitioners' and managers' efforts to enhance career interventions over time. As an *attitude*, continuous improvement reflects the cautiously optimistic belief that career interventions can be enhanced. As a *process*, continuous improvement encompasses a recurring cycle of examining current performance, identifying enhancement opportunities, acting, and performance reevaluation. The success of continuous improvement efforts depends on practitioners and managers knowing *what* to do, in terms of the interventions most likely to meet individuals' needs, and *how* to do it, in terms of appropriately managing the change in their organization (Sampson, 2006).

Whereas the call for accountability efforts is often spurred by external stakeholders, continuous improvement evaluation efforts are typically motivated by stakeholders internal to career services offices or organizations. The goal of continuous improvement initiatives is to actively seek ways to enhance the quality of a program or service, better allocate resources, or grow services into new areas. It may be tempting to see continuous improvement efforts as fundamentally at odds with accountability efforts—while accountability calls for demonstrating effectiveness and value of programs, continuous improvement actively seeks gaps, deficits, and areas for growth. However, rather than juxtaposing the two purposes as opposites, Makela and Rooney (2012) expressed that it is "more productive to consider them as endpoints on a continuum" (p. 2). Evaluation efforts rarely fall at the extremes (Ewell, 2009). Rather, it is desirable to find a middle ground from which to operate. This allows career practitioners to both tell stories about the effectiveness of career interventions, while continuing to evolve and grow career interventions over time.

Decisions regarding continuous improvement directions can vary considerably. They might include decisions to *discontinue, modify, or keep* various components of a career intervention, such as: service goals, intended audience, outreach and marketing plans, staff training, resources, timing, etc. Career practitioners might also include a decision to *keep* a career intervention as it is, and to broadly communicate stories of its effectiveness (to tell an accountability story; Makela & Rooney, 2012).

Defining Career Development

Evaluating career development, particularly when making accountability arguments, has been a particularly difficult issue because it is challenging to encourage all stakeholders to agree on a common definition. What is meant by career development? What are we trying to measure and achieve?

For example, Pietrofesa and Splete (1975) defined career development as "an on-going process that occurs over the life span and includes home, school, and community experiences related to an individual's self-concept and its implementation in lifestyles as one lives life and makes a living" (p. 4). Gysbers and Moore (1975) defined career development as "self-development over the life span through the integration of the roles, settings, and events of a person's life" (p. 648). McDaniels and Gysbers (1992) further refined this definition by adding factors of gender, ethnic origin, religion, and race to the original definition of career development. Such nonlimiting definitions of career development suggest that career programs provide services that facilitate whatever Pietrofesa and Splete, Gysbers and Moore, or McDaniels and Gysbers refer to as "career development." With such global definitions, how do practitioners and managers establish accountability for services rendered with any degree of precision?

Reardon et al., (2022, p. 5) took a slightly different perspective in providing a definition of career development that is more closely tied to academic disciplines. Drawing on the definitions provided by Sears (1982) in the *Vocational Guidance Quarterly*, they viewed career development as "the total constellation of economic, sociological, psychological, educational, physical, and chance factors that combine to shape one's career." Career development can also be understood as the implementing of a series of integrated career decisions over the life span (Peterson et al., 2002). This multifaceted view of career development is so complex that it almost defies measurement in practice.

Another approach toward understanding the phenomenon of career development may be an analysis of the activities practitioners typically perform when career interventions are offered. According to Drier (1977), Splete (1978), and Hoyt and Evans (1974), career development activities include (a) developing and clarifying self-concepts, (b) relating occupational information to self-information, (c) teaching decision-making skills, (d) providing opportunities for occupational reality testing, and (e) assisting individuals in educational and occupational placement. However, the question still remains, "For what specific activities will practitioners be held accountable?"

A fourth avenue for pursuing the meaning of career development may be the analysis of statements pertaining to the outcomes of career development services. Campbell et al., (1973) asked, "Does a career development program meet the needs of students at a manageable cost?" (p. 194). The National Vocational Guidance Association (1979) enunciated one evaluation standard relevant to the intent of this chapter: "Students demonstrate increased competencies in self-understanding of the world of work and leisure, career planning, decision making, and the ability to take action" (p. 108). Drier (1977) suggested the following outcome criteria: (a) increased use of community resources, (b) decreased dropout and absenteeism from school, (c) increased involvement of parents and teachers in guidance delivery, (d) increased work-related experiences, and (e) increased use of career development services.

Such outcome criteria may be helpful for the formulation of the intended effects of career development interventions, but one important dimension of intended outcomes consistently

appears to be omitted—namely, those changes in perceptual and cognitive thought processes that enable individuals to make informed and careful career choices. In other words, although much attention has been devoted to describing practitioner interventions and the ensuing general effects, the cognitive capacities that clients acquire as a direct result of career development interventions have yet to be clearly conceptualized and articulated. The central point of this chapter is that the development of self and options knowledge, career problem-solving and decision-making skills (sometimes referred to as competencies; Peterson & Burck, 1982), and metacognitions should lie at the core of the intended outcomes of any career development intervention and should form the nucleus of an accountability system.

The National Career Development Guidelines Framework (NCDA, 2004) provided another method for defining career development outputs (work on the development of these guidelines began in 1986 through the initiative of the National Occupational Information Coordinating Committee and professional associations and groups interested in standardizing practices in the career area). The most recent update was completed in 2004, and the guidelines are now hosted by the National Career Development Association on its website. The guidelines are organized into three domains of skill development including personal social development, educational achievement and lifelong learning, and career management. Each domain consists of a list of goals, along with performance indicators that provide a common set of career outputs that have consensus support from a wide variety of interest groups, including parents, educators, employers, career professionals, political leaders, and other citizens. It might be noted that these are not called *standards* because the sponsoring agencies and organizations did not seek to impose national accountability; therefore, the term *guidelines* were substituted.

Other initiatives undertaken by national and international organizations define career development and specify outcomes of career development interventions as connections are made between practice and policy. For example, the National Career Development Association adopted *A Policy Statement of the National Career Development Association Board of Directors* (available at https://ncda.org/aws/NCDA/asset_manager/get_file/39958?ver=29369) in 1993, which was later revised in 2011. This statement includes definitions of terms in the career area and a philosophical statement regarding work in the United States, as well as policy directives regarding career interventions related to the family and preschool age youth, K-6 age children, those in grades 7-9 and 10-12, and career development for adults and retired persons. More recently, in 2022, the European Centre for the Development of Vocational Training (CEDEFOP) facilitated a meeting of researchers, experts and specialists to work toward a common understanding of career guidance that could support policy, practice, and evaluation that monitors outputs and effectiveness of publicly-funded services. Such statements and frameworks by leading organizations working in the career development field help to standardize and clarify the nature and purposes of career programs.

In a CIP theory-based approach to the evaluation of career interventions, client changes are assessed first in terms of the cognitive skills, knowledge, and attitude (SKAs) acquired as a direct result of career interventions. These are the *primary* effects. Criteria such as job satisfaction, satisfaction with services, job acquisition rates, employment tenure, career exploration activities, or successful entry into schools or jobs are viewed as the consequential or *secondary* effects of intervention. A CIP theory-based approach focuses on the assessment of two levels of effects: primary changes in the individual, which concern the development of new cognitive capabilities; and secondary changes, which relate to the manner in which these newly

acquired capacities are applied to making informed and careful career decisions. This two-stage approach to defining the results of career interventions can lead to stronger, more precise linkages between the resources invested in an intervention and the results. In economic terms, the primary programmatic effects may be considered outputs, and the secondary effects may be considered outcomes (Kaufman & English, 1979).

Effects of Career Interventions

In this section, we consider the effects of career interventions in two stages. First, we consider insights from the career-intervention outcomes literature. What difference can career interventions make, and how have these insights impacted the development of the CIP theory-based approach to career services? Second, we argue that, "while it is helpful for informing our work, relying on this literature is not enough" (Makela & Rooney, 2012, p. 9). Our clients and practice environments are unique, and evaluation of our own programs and services is key to ensuring high quality delivery and continuous improvement.

Career Intervention Outcome Literature

In an effort to learn more about the impact of career interventions, including individual counseling, group counseling, workshops, self-help approaches, and career courses, several meta-analyses have been undertaken. These studies provide insight into the effects of career interventions. Spokane and Oliver (1983) reported that group or class interventions were more effective than individual counseling or other interventions. Later, Oliver and Spokane (1988) reported an analysis of 240 treatment-control comparisons in 58 studies comparing 11 different types of career interventions. They found that career guidance classes produced the largest effect size with regard to client gains resulting from the assortment of career interventions considered. Classes were followed by workshops, individual counseling, group counseling, computer-assisted guidance programs, and self-directed interventions. Classes also involved the greatest number of hours and sessions but were the most expensive intervention according to Oliver and Spokane (1988). They concluded that although career interventions are generally effective, individual and structured group interventions are most cost-effective. Furthermore, they noted that group interventions have a cost advantage because of the numbers of clients that can be helped at a single time.

Hardesty (1991) also conducted a meta-analysis consisting of 12 studies that evaluated career development courses offered for credit. Results of this meta-analysis confirmed previous research findings concerning overall positive effects of undergraduate career courses on increasing both career decidedness (48% more certain) and career maturity (40% more capable of making a realistic decision) of college students. However, Hardesty noted that the long-term effects of career courses—within a year or two or longer after completion of the courses—had not been established. Folsom and Reardon (2003) examined career course interventions from the perspective of both outputs and outcomes. More recently Reardon et al. (2021) summarized additional research on the effectiveness of career courses.

Another meta-analysis by Whiston, Sexton, & Lasoff (1998) examined 47 studies conducted between 1983 and 1995, including 9 studies of career classes. They found that career classes were the third most effective career intervention out of eight different categories of interventions examined. Career classes followed individual and group counseling in effectiveness but were ahead of group test interpretation, workshops, computer interventions,

counselor-free interventions, and other non-classified interventions. The researchers found that classes followed counselor-free interventions and computer interventions as least costly. Individual and group counseling showed strong, positive effects on career outcomes; however, self-directed interventions again appeared least potent. In another publication, Whiston and James (2013) concluded that "although the findings for career counseling interventions that promote career choice are somewhat mixed, there is a growing body of literature indicating that certain interventions have long-term effects" (p. 567).

Brown and Ryan Krane (2000) summarized prior meta-analytic studies and noted that career interventions are effective because the average client outscores the average nonclient by about one-half a standard deviation. The findings related to how, why, and for whom the interventions were inconclusive. In conducting a series of meta-analyses on 62 studies, Ryan (1999) and Brown and Ryan Krane (2000) concluded that demonstrably effective career interventions have five common elements:

1. Allow clients to clarify career and life goals in writing

2. Provide clients with individualized interpretations and feedback (e.g., test results)

3. Provide current information on the risks and rewards of selected occupations and career fields

4. Include study of models and mentors who demonstrate effective career behavior

5. Assist in developing support networks for pursuing career aspirations

Brown and Ryan Krane suggested that career counselors and others designing and evaluating the impact of career interventions should assess the extent to which at least three of the five listed elements are included in the intervention.

Whiston, et al. (2017) conducted a replication study of Brown and Ryan Krane's (2000) meta-analysis study, with a few notable differences in study design (e.g., including both published and unpublished studies, using social cognitive career theory to inform meta-analyses coding). Interestingly, while Whiston et al. did find a weighted mean effect size consistent with previous studies (0.352), they did not find support for the same critical ingredients as Brown and Ryan Krane. Rather, counselor support was associated with the largest effect sizes, as well as interventions containing values clarification and psychoeducation concerning the process of choice goals attainment (e.g., teaching career decision-making processes). A later meta-analysis study by Whiston, et al. (2003) specifically examined differences among treatment types, including: (a) individual career counseling, (b) individual test interpretation, (c) group career counseling, (d) group test interpretation, (e) career workshop or structure groups, (f) career classes, (g) career computer systems without counseling, (h) career computer systems with counseling, and (i) counselor-free interventions. They examined research published between 1975 and 2000, covering and extending the period addressed by previous meta-analyses. Their findings began with noting a trend of decreased interest in career outcomes research, such that 60% of identified studies were published in the decade between 1975 and 1985, while 40% were conducted in the remaining 15 years (between 1986 and 2000). They also noted the paucity of studies including individual career counseling, which made it difficult to make claims regarding this treatment type. The clearest finding asserted by Whiston et al. (2003) indicated that a counseling component enhanced the effectiveness of career interventions, as compared to counselor-free interventions. In a more recent analysis, Soares, et al. (2022) noted the positive

impact of career interventions on decision-making skills, and further emphasized the importance of providing current world-of-work information to students.

The CIP theory-based approach to career services gains much from the insights in this career intervention literature. For example, both the five elements highlighted by Brown and Ryan Krane (2000), and the values clarification and goal attainment education components identified by Whiston et al (2017), have been prominent themes in the presentation of a CIP theory-based approach to career interventions (Brown, 2015; Sampson et al., 2020), as will be illustrated in the CIP evaluation models described later in this chapter. Additionally, the CIP readiness assessment and service delivery sequence (See Chapter 7, Figure 7.2), communicates intentional ways that the individual assistance by career professionals is built into client experiences, addressing the need identified by Whiston et al. (2017; 2003).

Connections to Evaluation of Career Programs and Services

Why is it necessary for career professionals to take on evaluation challenges when respected scholars reach conclusions such as "career counseling has generally been shown to have positive effects, and the question of whether career counseling works is no longer needed" (Oliver & Spokane, 1988, p. 447)?

The reason has to do with the limitations of career intervention outcomes literature. Beyond such broad conclusions about positive effects, the research offers little guidance regarding what aspects of career interventions are particularly effective, for which clients, under what set of circumstances. A variety of limitations have been highlighted as contributing to the challenges in examining career intervention outcomes, particularly as they pertain to specific client groups, including (a) a lack of overlap and replication in available studies; (b) insufficient reporting of validity, reliability, and data about subject attributes; (c) few standardized measures across studies; (d) a lack of detailed information presented in the research regarding career intervention components; (e) short-term interventions and data collection that limit the ability to examine lasting changes over time; and (f) the use of primarily quantitative methods that may show changes before and after an intervention but do not provide insights regarding why or how changes occurred (Brown, 2015; Brown & Ryan Krane, 2000; Heppner & Heppner, 2003; Hughes & Karp, 2004; Luzzo, et al., 1999; Oliver & Spokane, 1988; Whiston et al., 1998, 2003). For a more in-depth discussion of the strengths and weaknesses of career intervention outcomes literature, see Makela (2011).

Due to gaps in available literature, career professionals are encouraged to embrace evaluation of career programs and services to develop a foundation for evidence-based practice (Baudouin & Hiebert, 2007; Hiebert, 1994; Sampson & Lenz, 2023). Understanding the positive findings of past career intervention outcomes literature is helpful for motivating this work, providing evidence that clients generally can and do achieve desired outcomes. Yet, it is the responsibility of career practitioners to monitor and evaluate the effectiveness of their career interventions in their unique clients and settings (Heibert, 1994). Career interventions are not one-size-fits all; different clients respond to career interventions in different ways. When we evaluate programs and services in a regular and systematic manner, we can use information gathered to communicate effectiveness to stakeholders (Sampson & Lenz, 2023), as well as to inform decisions for continuous improvement.

**Assumptions and Propositions of Career Interventions**

Ultimately, the aim of career interventions should be to foster changes in the ways clients perceive themselves and the world of work and the ways in which individuals incorporate such perceptions in the service of generalized career problem-solving skills (Weitz, 1964). In order to demonstrate the linkage among resources invested in career interventions, the cognitive development of persons receiving interventions, and results obtained, the following assumptions are made:

1. There is a set of fundamental cognitive abilities (namely, generic problem-solving and decision-making skills) and knowledge that undergird effective career problem solving and decision-making. These abilities include such subordinate skills as Communication, Analysis, Synthesis, Valuing, and Execution (CASVE), as described in Chapter 2.

2. A career intervention can be defined as a learning event in which knowledge and cognitive skills are prescribed, mastered, and applied to solving career problems, making career decisions, executing them, and achieving satisfaction with jobs and life in general. The basic elements of a learning event are (a) an objective stated in performance terms, (b) learning activities designed to foster the attainment of the objective, and (c) a measure to ascertain whether the objective has been attained.

3. There is a causal linkage between the acquisition of career problem-solving and decision-making skills in a career intervention and subsequent career and life adjustment.

4. The cost for the delivery of a career intervention is determined by accounting in monetary terms for all the resources required to administer an intervention that enables a cohort group of individuals with common career problems to achieve a desired level of proficiency in self and options knowledge, CASVE skills, and metacognitions. Cohort groups can either be intact groups, as in group counseling, or an identified set of individuals with common problems who use a career service within a certain time frame.

5. A career services program is composed of an integrated set of career service interventions. Administratively, it is an organization unit with a mission, goals, and a budget.

In order to establish an accountability system, one must be able to document the results of career interventions in measurable terms and to account for the resources invested in them (Niles & Harris-Bowlsbey, 2022). Therefore, one side of our accountability model concerns documentation of the activities and results of a career intervention; the other side addresses the accounting of resources to deliver the intervention (see Figure 19.1). Thus, the proposed accountability model is a value-added model in which individuals acquire a new capability (or set of capabilities) that they did not possess prior to participation in a career intervention.

Figure 19.1

The Components of an Accountability Model Based on CIP Theory [70]
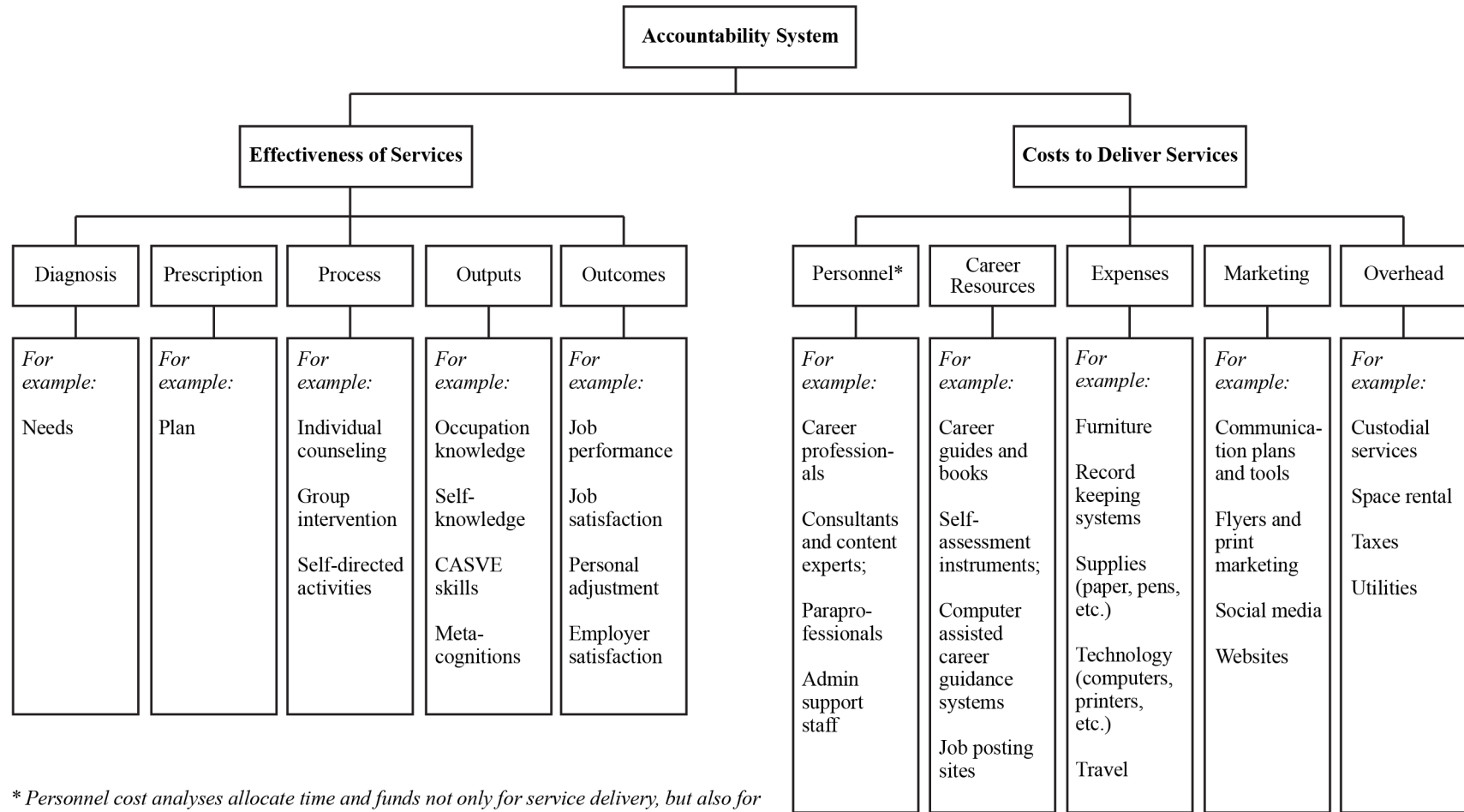
* *Personnel cost analyses allocate time and funds not only for service delivery, but also for training, supervision, preparation for service delivery, data collection, reporting, etc.*

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[70] Content in this figure was adapted from Sampson et al., (2004). Adapted with permission.

The Five Components of Effectiveness

In CIP theory's accountability model, the effectiveness of an intervention depends on (a) a diagnosis of client needs, (b) a prescription of activities to help the client address such needs, (c) the documenting of plans and activities that describe the process of intervention, (d) the outputs or primary effects of the intervention, and (e) the outcomes or effects of the primary changes. This model—diagnosis, prescription, process, outputs, and outcomes (DPPOO)—is elaborated in the following sections of this chapter. Basically, the proposed approach involves the identification of the skills and knowledge to be acquired in an intervention, the prescribing and documenting of learning activities to help individuals achieve them, the measuring of changes in perceptions and cognitions, and finally, the determining of whether these changes are manifested in subsequent life-adjustment outcomes.

Diagnosis

In CIP theory, individual problems are defined in terms of needs (Kaufman, 1972) that are the discrepancies or gaps between existing levels and desired levels of knowledge and skill development. The objectives of a career intervention are derived from the common needs of a group of individuals (Burck & Peterson, 1975). Accountability at the diagnostic stage, therefore, requires an analysis of individual problems that identify the knowledge and skills persons need to solve those problems, a description of the assessment techniques used to ascertain entry-level knowledge and skill performances, documentation of the entry-level performance by the group, and a statement of the desired level of attainment by the group (i.e., the objectives for the intervention). From a CIP theory perspective, an important element of diagnosis is the assessment of individuals' readiness for career decision-making. Table 19.1 presents diagnostic information for a six-week workshop for a group of 20 unemployed adults seeking assistance with career decision-making. The differences between the entry levels of development and the desired levels of development of cognitive skills and knowledge constitute the needs of this cohort of clients. A cohort group is a group of individuals with common career problems who experience the same career intervention.

Table 19.1

Diagnostic and Output Data for a Six-Week Career Course for 20 Unemployed Adults [71]

Skill	Assessment Technique	Entry Level of Development	Desired Level of Development	Achieved Level of Development
Metacognition: problem-solving heuristic	Success and failure incidents; career choice scenarios	70% described a trial-and-error strategy for securing a job.	80% can apply the five-step CASVE problem-solving model to job search and selection.	90% could apply the five-step problem-solving model to job search and selection.
Communication skills	Written response to simulated job interview questions; job interview role-play	25% gave effective responses to written employer challenges; 35% gave effective responses in a simulated job interview.	80% gave assertive responses to written employer challenges; 80% gave assertive responses to simulated job interview questions.	95% could write assertive responses to interview questions; 80% demonstrated assertive response in a role-play.
Analytical skills	Open-ended question asking clients to list and rank reasons why they have difficulty securing a job	75% listed the first reason as a factor outside their control (e.g., prejudice of employers or no work available).	90% lists the first reason as a lack of job competence skills, lack of information about new jobs, inadequate educational experience, etc.	85% gave the first reason as a factor over which they have control.
Synthesis skills	OAQ*; list of educational or training opportunities for chosen jobs	60% listed no more than two suitable occupations; 50% listed one; 50% could not list appropriate training opportunities.	80% can list at least five suitable occupations; 80% can list at least one training or educational facility in the community for each occupation.	85% could list at least five suitable occupations; 95% could list appropriate training opportunities in the community for each alternative.

Note: * Occupational Alternatives Question (Slaney, 1978)

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[71] Content in this table was used from Sampson et al., (2004). Used with permission.

Prescription

The prescription stage involves the development of a plan for career practitioner and client activities to meet the diagnosed needs—that is, the knowledge and skill gaps. The development of specified skills, knowledge, and attitudes (SKAs) is the objective of career interventions; a task analysis can be used to develop a series of learning activities that lead clients from simple to complex skills (Gagne, 1985). The mastery of a content domain, which precedes cognitive skill development, may be structured through content analyses in which clients master certain sets of facts, concepts, rules, or operations on which to base higher-order problem-solving skills. For example, career development concepts for the intervention presented in Table 19.1 might include a knowledge of communication response modes (such as defensiveness and assertiveness); the factors affecting the supply of applicants and demand for workers for a given occupation in the community; and the relationships among education, training, and job requirements.

Process

Therapeutic and educational processes are the series of activities, both planned and unplanned, performed by the individual and the practitioner to bring about change in the diagnosed skill and knowledge gaps. For accountability purposes, it is important to record accurate and detailed descriptions of practitioner and individual activities, the attainment of milestones leading to the acquisition of desired skills and knowledge, the accomplishment of prescribed tasks or experiences, or scores on progress tests or inventories. The most important data to collect are those that indicate progress made toward the development of skills or the mastery of new knowledge. In the six-week workshop for unemployed adults, the documentation of the process could consist of recording the attendance at the following activities: two hours of listening-skill training; a 30-minute video on employability skills plus one hour of discussion; a 30-minutes hands on activity on how to use web-based job opening sites; a 30-minute presentation on family support (e.g., child-care) resources in the community; two hours of assertiveness skill training with a short, written assignment; and an interview rehearsal.

Outputs

The outputs of a successful career intervention are the new skills and knowledge that are acquired, such as the development of communication skills, the capacity to analyze career problems, the ability to formulate feasible courses of action, a clearer understanding of one's own values and the values operating in a social or work environment, and increased planning skills that lead to the successful attainment of self-determined goals. These primary individual changes are the direct result of career interventions. Earlier, we discussed the National Career Development Guidelines (NCDA, 2004) as one initiative designed to standardize the specification of career program outputs. Accountability for output requires documenting the gains made in self-knowledge and options knowledge, CASVE skills, and metacognitions from entry to exit performance levels for a cohort treatment group. These are sometimes referred to as performance indicators. Sampson et al. (2000; 2013) identified instruments that might be used to assess changes in outputs as the result of career intervention programs. The output data for the six-week career course are presented in the last column of Table 19.1, "Achieved Level of Development."

Outcomes

The outcomes of a career intervention are the effects that result from new cognitive or perceptual capacities (i.e., the outputs). These new cognitive and perceptual capacities may include the following:

1. A more focused and organized plan for career exploration

2. Reduced fear of success or failure

3. Greater toleration and understanding of temporary career indecision

4. Successful employment search

5. Greater satisfaction with a post-secondary training program

6. Greater job satisfaction and/or life satisfaction

7. Reduced absenteeism from school or work

8. Increased performance in school or work

Although there are published measures related to these outcomes—for example, the Satisfaction with Life Scale (Diener et al., 1985; Pavot & Diener, 2008)—a locally-developed instrument that is more directly related to the objectives of a given intervention may provide more valid information than a published instrument. The inclusion of open-ended questions may provide the practitioner with valuable qualitative information about the intervention as well. Critical incident methods (Flanagan, 1954), in which clients report successes and failures following a career intervention, may also be extremely helpful. In order to assess the enduring effects of an intervention, one-month, six-month, and one-year follow-up studies are recommended.

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Cost Analysis

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Completing a cost analysis alongside assessments of program and service effectiveness can be a helpful approach when planning, implementing, and advocating for career interventions. Some examples of career intervention components that may contribute to cost are illustrated in the "costs to deliver services" branch of Figure 19.1. A cost analysis for a career service program begins by summing the approximate costs of the components that make up a career intervention (Haller, 1974). This initial budget provides a foundation from which to communicate and plan, an essential step when establishing an intervention.

It is sometimes then tempting to ask about the relationship between program costs and the observable outcomes of the career development intervention, which is often a very difficult causal linkage to draw (Peterson & Burck, 1982). Nevertheless, as noted by Niles and Harris-Bowlsbey (2022), program assessment outcomes are sometimes discussed in terms of whether service delivery is available and economically feasible. When this is the case, there is often a gap between the two data types. First, the observed outcomes are presented demonstrating the impact of the intervention. Then, an evaluative judgment call is made regarding the worthiness of the resources invested. Making judgments about the value or worth of a program is drawn from evaluation practice (Makela & Rooney, 2012; Stufflebeam, 2003), and these judgments can be defined in many ways depending on the needs and interests of key stakeholders, such as administrators, funders, clients, family members, community members. Essentially, we might

ask, are the outcomes sufficient to advocate for the dedicated financial support? Can we use the data collected to advocate for continued funding and program support? What modifications or areas of growth might we advocate for based on what we have learned and shared from program assessment efforts?

An additional benefit of a thorough cost analysis is that it provides helpful insights to inform modifications to career interventions. Cost analyses provide insights into funding areas that cannot be eliminated, areas that can be streamlined for increased cost-effectiveness, and areas to scale-up for greater impact. Thorough plans and documentation facilitate nimble movement for making future recommendations.

Illustrating Cost Analysis and Program Advocacy Informed by CIP Theory

To illustrate cost analysis in program planning informed by CIP theory, consider the development of paraprofessional peer mentoring programs that offer brief staff-assisted services. These programs have a long history of use in career services in higher education environments (Lenz & Panke, 2001). Students trained to provide peer-to-peer services have been recognized as "amazing talent at a bargain price" (p. 13). As members of the target audience, student paraprofessionals can connect with their peers in spaces that are difficult for professional career practitioners to reach. Student paraprofessionals also bring new ideas and insights and energy to the team.

Highly effective peer paraprofessional programs focus on a clearly defined set of desired learning outcomes. CIP theory can provide insights into the focus areas for these programs. For example, peer paraprofessionals may be trained to help clients understand a variety of ways to gain experience during college. Continuing the college peer paraprofessional example, students might engage in student organizations, volunteer and service experiences, undergraduate research, internships and part-time jobs, study abroad, and so on. Peer paraprofessionals might be trained to focus on these aspects of *options knowledge*. Peer paraprofessionals share ways of gaining experience with fellow students and help them engage in *information gathering* by searching the various databases to seek opportunities. This service can be provided in a *brief staff-assisted* environment, so that peer paraprofessionals and students can work through databases or instruction. Peer paraprofessionals can be trained to provide periodic check-ins on student progress. Depending on initial interactions, the peer paraprofessionals can suggest next steps for the students they serve, such as providing *self-help resources*, invitations to return to the *brief staff-assisted* peer-to-peer service as needed, or referring to *individual case-managed services* for more in-depth help.

In this way, the peer paraprofessionals can provide a front-line, just-in-time experience for a large number of students. Osborn et al. (2016) noted that in one year, career services offered in this way resulted in over 19,000 meetings with students using the brief staff-assisted model. Peer paraprofessionals can also get the students who need the most in-depth assistance to career practitioners. This helps an office be strategic about how time is dedicated in individual services. Those with the greatest needs that often go beyond the information gathering focus of the peer-to-peer program are recommended to individual case-managed services with career practitioners. (See Chapters 4, 7, and 8 for information on assessment of readiness for career decision-making and differentiated service delivery).

What costs are involved in a peer paraprofessional program like this? Reflecting back to Figure 19.1 provides some example insights. *Personnel costs* involved would include: (1) a career practitioner to provide ongoing training and supervision, as well as (2) a team of peer paraprofessionals. Costs related to the *career resources* needed to deliver services may need to be considered. Is anything uniquely needed to support the paraprofessional program approach? *Space* would be need for peer paraprofessionals to engage with students. *Marketing* and *communication* resources are needed to bring students to the service and to understand the value of the peer-to-peer services. *Record keeping*, *technology*, and *communication* structures are needed for effective service delivery and supervision.

When analyzing costs of a program like this, it may also be helpful to outline the costs of the particular program components, as well as to imagine the alternatives. For example, if presenting the case of a peer paraprofessional program, one model could be presented that highlights capacity and focus of this program. A second model could be presented at the same budget that included only career practitioners – asking, if only career practitioners were used, what might the difference in reach look like? The question then becomes a question of evaluating value – what type of reach does the particular institution or work environment value? And later, as effectiveness data are gathered, did the approach selected have the expected and desired impact?

Requirements to Implement CIP Theory

There are four fundamental requirements to implement a CIP theory-based approach to accountability in career interventions and programs.

1. A knowledge of the skills and content domains that underlie informed and careful career decision-making processes in certain contexts.

2. A knowledge of the conditions that bring about the development of knowledge and skills in clients.

3. Measures capable of detecting subtle changes resulting from career service interventions.

4. A basic knowledge of program planning and budgeting to document the resources invested in career intervention.

These four requirements point to the need for career practitioners to become familiar with new research findings in cognitive and developmental psychology, with methods of measuring changes in cognition and perception, and with human services program management (Duggan, & Jurgens, 2007; Lewis et al., 2012). Unfortunately, these areas of study are typically given very little emphasis in the training of career practitioners. However, if we view career development practice as fostering skills and knowledge that can be used throughout life, instead of merely helping an individual with a single career choice in time, then becoming familiar with these domains of knowledge becomes imperative.

Implications of Distinguishing Between Outputs and Outcomes

The proposed accountability model described in this chapter provides a paradigm for defining the results of career interventions by drawing a distinction between outputs (the direct changes in individuals as a result of service) and outcomes (the ways in which such client gains are actualized in daily living). This distinction provides a more precise perspective about what

career practitioners can be held accountable for. Career practitioners can reasonably be held more accountable for the knowledge and skills that clients acquire in career interventions than for the ways in which changes are implemented in the course of daily living; such changes may be influenced by a host of capricious environmental factors, such as a change in the economic base of a community due to a plant closing or the elimination of a military base. Paradoxically, at the programmatic level, a cohort of clients with similar career development problems should demonstrate worthwhile effects for both the individual and society at the outcome level if the intervention is to be considered effective. More specifically, a career practitioner can be held accountable for helping clients evaluate their abilities and interests, for clarifying career goals, or for acquiring employability skills. However, career practitioners can be held accountable only in a limited way for whether any individual secures a job in a specified length of time. At the aggregate level, over an extended period of time, career practitioners can be held accountable for whether a cohort of clients acquires jobs or chooses major fields of study that are satisfying.

Perhaps more important, the model compels a rethinking of the aims of career interventions. In addition to focusing career interventions on such issues as the acquisition of career information, job search strategies, and interviewing skills (which are some of the important fundamental skills in career development), career practitioners can also view their interventions in relation to a more comprehensive perspective that enhances career problem-solving and decision-making skills. If career practitioners can help individuals surmount and transcend their immediate career problems or crises so that they may acquire enduring capabilities that will enable them to manage their own career development over a lifetime, perhaps then a truly valuable service will have been provided. By demonstrating that clients have acquired new problem-solving capabilities (outputs) and can apply them to their daily lives (outcomes), accountability requirements will be met as well.

Using an Implementation Model to Improve Accountability and Evaluation

The effectiveness of evaluation and accountability strategies are influenced by their sequencing. For example, experience with formative evaluation during the creation of a career intervention can inform subsequent summative evaluation of the career intervention's impact, which in turn can provide a source of accountability data. In planning evaluation and accountability strategies, it is important to know what needs to be done at what time and for what purpose. The eight-step implementation model for career intervention (Sampson & Lenz, 2023) indicates a specific sequence of evaluation and accountability tasks. This model includes the following steps and related evaluation and accountability elements:

1. Evaluate Current Career Interventions

   - Prepare for evaluation by reviewing any available strategic/long-term plans, prior evaluations, external reviews, related public/institutional policies, related professional standards, information on the needs of clients served, and data on how current career interventions address client needs.

2. Select, Adapt, Revise, and Develop Improved Career Interventions

   - Conduct a formative evaluation of career interventions as they are selected, adapted, revised, and developed.

3. Integrate Improved Career Interventions with Existing Career Interventions

- Conduct a brief formative evaluation of the integration of improved career interventions with existing career interventions.

- Plan subsequent summative evaluation and accountability efforts.

4. Train Staff in Pilot Sites

- Conduct a brief formative evaluation of the training of staff at pilot sites.

5. Conduct Pilot Testing

- Evaluate progress in pilot testing.

6. Train All Staff Members

- Evaluate staff training effectiveness and make any necessary changes.

7. Deliver Career Interventions

8. Conduct Ongoing Evaluation and Continue Accountability Tasks

- Collect, analyze, and interpret summative evaluation data and decide how this data can contribute to accountability.

- Collect, briefly describe, and then disseminate accountability evidence to staff members, collaborating partners, stakeholders.

The above steps and elements of evaluation and accountability can be repeated as needed.

Managing Data in Practice

For those who are getting started with evaluation of career interventions, this chapter may feel overwhelming—considering inputs, outputs, outcomes, costs, and effectiveness. It is a lot of information to make sense of all at once. How can career practitioners engage in meaningful and manageable assessment activities that provide useful stories for accountability and assessment?

Makela and Rooney (2014) suggested selecting one data type to start with at a time in order to keep data projects realistic and manageable. As much as possible, integrate data collection into daily work and interactions with clients. For example, career practitioners might collect a measure of career readiness as a client starts a program and then reassess career readiness at the end of a program in order to look for areas of growth. See Chapter 8 for a more detailed discussion of readiness assessment. Alternatively, they might assess growth in career management skills by collecting resumes as clients begin their interactions, and again as they complete their interactions, so that evidence of improvement might be assessed.

When career practitioners select a specific project or set of data points to focus on, they are more likely to see an evaluation project through to completion, and to be able to share clear narratives of the impact of their program or service. They are also likely to have additional questions or data points they are curious about, which can then be the focus of future evaluation efforts—constantly growing and expanding their experience and knowledge.

Makela and Rooney (2014) encouraged career professionals to think of evaluation of career services in terms of building a house. Each data project is a story that lays a single brick. Focus on laying one brick at a time, to build up a strong foundation. That foundation becomes a rich body of evidence to inform future actions and advocacy.

**Using a Data Archive to Manage Research, Evaluation,
and Accountability Results**

Creating a technology-based archive of data using a variety of assessment tools allows for research, evaluation, and accountability. What goes into a database should reflect the goals and values of the career services setting. For example, if a goal of a particular career intervention is to help clients make career decisions, a question about how decided a person is before, during, and after receiving services might be useful to ask and include in the database. The majority of the database should consist of assessments with stable items that do not change so that comparisons can be made over time. At the same time, having flexibility to add in items for a period of time can answer specific research questions. For example, a center might routinely include client responses to the Career Thoughts Inventory, but add in items from the Beck Depression Inventory (Beck et al., 1996) to answer a question about the relationship between career thoughts and depression, and then stop collecting the BDI information once the research study has been completed. Sites should check with appropriate sources such as an Institutional Review Board to determine if informed consent is required for collecting and storing client information. One recommended step for protecting client privacy is to have two separate databases, in which the client is identified by a code or case number in the password-protected comprehensive database, and the "key" that matches the client's identifying information with the code or case number is in a second, password-protected data base.

A first step in creating an archival database is to identify measurable outcomes that clients should attain as a result of receiving services. These outcomes should be specific enough to be meaningful, but not so specific to where they are applicable for just one specific client career goal. For example, in evaluating drop-in career service delivery, Osborn et al. (2016) used pre and post questions that focused on how knowledgeable, confident, and anxious, clients were about their next step. By focusing the question on the client's "next step," the questions could be applied to a client choosing a major, as well as to a client interested in job searching.

In addition, including key client demographic information can provide a picture of what a "typical" client looks like, and also highlight who is and is not utilizing services. Other useful information to include is the number of sessions each client has received, client goals, assessment results, and satisfaction survey results. Collecting pre and post surveys allows for evaluation of services, and feed into strategic planning for the career program. In order to be most useful, items on both pre and post surveys need to closely match so they can be compared. Open-ended items can provide context and depth but are often difficult and time-consuming to score and interpret. When possible, providing options for individuals to choose or rate will help address this problem and be easier to use in analyses. Including opportunities to identify "other" responses may provide the best of both. For example, an item focused on the main career concern could list common concerns from which the client chooses, along with a write-in option in case that concern isn't listed.

Some sites may utilize client software that automatically creates and populates a database. However, it is likely the case that clients will engage in activities or complete assessments that are not associated with the client software, and in that case, the person overseeing the archival database will need to either manually input the desired data or merge the databases. While it may be tempting to include every possible assessment or data point, this can quickly become an overwhelming task. Thus, careful, ongoing consideration as to what data will provide the most useful answers to questions of program accountability, evaluation, and/or

research is necessary. Lenz and Dozier (2019) provide additional guidelines and strategies for incorporating career assessment into research and program evaluation.

Chapter 19 Summary

This chapter focused on the problems of defining accountability and career development in operational form so that resources could be tied to results. In order to accomplish this, it is useful to distinguish between the outputs of career interventions and their outcomes. A five-component effectiveness model and a basic cost model were introduced, with examples of data for each. The effectiveness of career service interventions is a function of the degree to which individuals acquire self-knowledge and options knowledge and develop thinking (CASVE) skills. A method for analyzing costs to administer a career intervention based on CIP theory was also introduced. The requirements to implement a CIP theory-based accountability approach and the possible implications of the approach were discussed.

Getting the Most Benefit from Reading Chapter 19

To effectively learn the material in this chapter, complete one or more of the following activities:

- Locate a career development service and ask the director to describe the budget process over time.

- Locate a career service and identify an intact group. This group could be intact in a statistical sense—that is, an aggregate of individuals with common career problems; they need not actually meet as a group. Describe the outputs for the group. Describe the intended outcomes. Ascertain the direct and indirect costs of conducting the group. Where might cost savings be realized without reducing the effectiveness? How might effectiveness be increased without increasing the costs?

- Develop an evaluation strategy for a specific career intervention targeted at a group of clients who are served by a particular setting. Document the effectiveness and the costs for the intervention to this group.

- Ask an established career services program for a copy of any recent internal program evaluation report. Determine the extent to which it includes the various components outlined in this chapter.

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CHAPTER 20
STRATEGIC PLANNING FOR CAREER SERVICES

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This chapter explores strategic thinking, operations planning, and strategic planning as ways to help us anticipate important social and organizational changes so that we may continue to offer timely and responsive career services. In addition, it provides preconditions for career services and the manner in which they contribute to wider employment or societal goals. After

reviewing this chapter, the reader should be able to (a) define strategic thinking and strategic planning, (b) contrast strategic planning with operations planning, (c) describe the six steps in strategic planning, (d) relate strategic planning to cognitive information processing theory (CIP) and to accountability, and (e) describe the four principal roles of the modern career practitioner. This chapter begins with a discussion of strategic planning and the aims of career services and continues with an examination of social trends influencing strategic planning, strategic thinking and strategic planning, why strategic planning is necessary, guidelines for strategic planning based on CIP theory, organizational context and the implementation of a strategic plan, roles of the career practitioners in a CIP theory-based environment, role of public policy in strategic planning, and differentiated service delivery and public policy. The chapter concludes with a summary and recommendations for getting the most benefit from reading the chapter.

Strategic Planning and the Aims of Career Services

At the beginning of the 20th century, Frank Parsons and other leaders of the progressive movement in the United States engaged in "strategic planning," which led to the development of the vocational guidance movement and the beginnings of the counseling profession. Although there is no documentation of their work that is actually labeled strategic planning, the evidence suggests that is exactly what they did. Providers of career interventions, indeed the nation, are still called on to engage in strategic planning regarding social policies and institutions that will enable citizens to work effectively, both at the individual level and the societal level. Camille DeBell (2001) provided a thoughtful analysis of the social conditions in the United States 100 years ago that led to the development of career guidance and counseling. She pointed out that…

> although the world of work is still responding to some trends initiated a century ago (such as globalization, immigration, equity concerns, technological advance), there are also exponential changes, and the world of work is not the same as it was even a decade ago. It is essential that career practitioners in all their varied work environments help clients understand this and prepare for the unpredictable—the twenty-first century of work (p. 87).

This chapter relates the principles of accountability introduced in Chapter 19 to the principles of strategic planning and demonstrates how strategic planning can be used to offer relevant and effective career services in a rapidly changing world. From a strategic planning perspective, the two principal aims of modern career services are to (a) provide learning opportunities to help individuals acquire new knowledge and capabilities that will enable them to become better career problem solvers and decision makers and (b) be responsive to the needs of the clients, organizations, or communities that receive these services. These aims require a continual assessment of both the internal and the external environment of the career services program. Through strategic planning, career service programs will be better prepared to compete for resources, as well as to attain their goals, objectives, and mission.

Strategic Planning, CIP Theory, and a Career Service Mission

A career service's mission statement is a single comprehensive statement that describes the very business of the service which distinguishes it from other services in an organization or from like services in other organizations. It also serves as an organizing principle of a service that keeps it "centered" in maintaining consistency of its services over time. Often, services are called on to incorporate additional services or purposes externally or to add services from

speculation, experimentation, or ambition internally. In either case, the mission statement provides a focus in asking the strategic question, "How does this proposal align with our business?" Strategic planning is a method or process through which decisions to expand, contract, or alter services are made.

An example of a hypothetical mission statement adapted from the [Florida State University Career Center](#) (2023), states the following:

> The Mission of the Career Center at High Quality University (HQU) is to offer state-of-the-science career services to students, alumni and the community reflecting the core teaching, research, and service functions of the university. This mission is carried out through the following purposes:
>
> • Provide comprehensive career interventions,
>
> • Train career service practitioners,
>
> • Conduct life/career development research, and
>
> • Disseminate information about life/career services and issues to the university community, the nation, and the world.

This comprehensive statement, with four primary purposes, was developed through strategic planning that involved contributions of stakeholders who represented practitioners from within the service, clients of the service, university administrators, the state Department of Education personnel, and nationally prominent career practitioners and researchers. The kind and manner in which these purposes are carried out makes the HQU Career Center distinctly different from all other college and university career centers in the world.

The *strategic planning* process, typically carried out approximately every 5 years, begins by asking, "Are we doing the right things in this educational institution or corporation?" This question differs from *operations planning* which asks the question, "Are we doing things right?" The approach to answering both questions is distinctly different in terms of purpose, method, and outcome. Finally, through an effective strategic planning process, a career service is better prepared to maintain its goals and objectives in the midst of distractions and threats and to compete for resources to attain them.

The question now asked is, what is the relationship between strategic planning and cognitive information processing (CIP) theory? In response to this question, there are two principle aims of CIP theory which cut across and are embedded within the four purposes of the HQU Career Center mission: (a) to provide learning opportunities to assist individuals in acquiring new knowledge and capabilities that will enable them to become better career problem solvers and decision makers, and (b) to be responsive to the needs of clients, organizations, and communities that receive the products (or outputs) of these services. Thus, attaining these aims include (1) the delivery of career services, (2) training in how to deliver effective career advising, counseling and instruction, (3) the advancement of research to bring about the desired outputs and outcomes (Peterson & Burck, 1982) of career services, and (4) dissemination of knowledge regarding how these aims are attained. In some respects, the HQU Career Center serves as laboratory for advancing the "state-of-the-science" in helping individuals acquire career problem-solving and decision-making skills.

Social Trends Affecting Strategic Planning

A key aspect of thinking about strategic planning for career services is to consider a broad range of social trends that affect work in this area. This section highlights a selected number of those trends, including the global economy, technology, alternative ways to work, and changing family and work roles. Chapter 21 discusses additional trends that may impact the design and delivery of career services and the evolution of CIP theory.

The Global Economy

The growth of the global economy is illustrated by the emergence of a wide variety of options for persons to work globally. This has multiple implications for strategic career planning. Broadband connectivity, cloud computing and other innovations have greatly expanded growth in the global and digital economy (International Labour Organization, 2021). People have the option to sell their labor through a wide variety of digital platforms, some of which enable them to work in their local community, while others involve web-based platforms that allow for remote work across the globe. While some of these platforms provide attractive, flexible options for freelance or home-based workers with high level skills, others may involve low wages, unpredictable work schedules, limited benefits, and a lack of workplace protections (Blustein, 2019; ILO, 2021). The global economy will continue to rely on so-called "knowledge workers," who know how to allocate knowledge and information to productive use. Careers will continue to unfold in a global context with greater value being placed on value added skills such as flexibility, adaptability, and resilience. These types of skills will be essential as individuals navigate their career journey within a global labor market.

Growth of Technology

Technology continues to change the way many organizations conduct business and provide services, and this can have implications for an individual's strategic career planning (Manyika, 2017; Tang, 2019). For example, in the financial industry, computers are set to automatically move money to and from accounts when certain preset conditions exist. The Internet and other technological advances make it possible for individuals and organizations to have instant contact with one another, at little cost. In addition, it's hard to predict how the advances in artificial intelligence (AI) will impact work and life in the future (Bankins & Formosa, 2023; Kochhar, 2023; Monthly Labor Review, 2022; Stahl, 2021; Zahidi, 2023). In recent years the COVID pandemic further highlighted how technology can be employed to enable individuals to work remotely (Parker et al., 2022), in some cases expanding choices and in others replacing human workers with machines and robots (See Chapter 21 for more on COVID and work). It is virtually impossible to overestimate the impact of technology on careers and the provision of career services. Indeed, the expansion of Internet applications has radically changed the ways in which career interventions are provided to various constituencies. This was further highlighted by the way career services pivoted to remote delivery of counseling, course instruction, workshops, and brief staff assistance (Osborn et al., 2022). The pandemic illustrated how a CIP-theory based approach could be adapted in a virtual format, including the use of CIP theory handouts (Pyramid, CASVE cycle, Individual Learning Plan), assessments (e.g., CTI, CSI, DSW), worksheets (Guide to Good Decision-Making Exercise), and related materials. Access to video conferencing technology (e.g., Skype, Zoom) and course learning management systems (e.g., Blackboard, Canvas) have allowed career practitioners to provide services to

clients and students without the requirement of face-to-face meetings. This has important implications for career practitioners around the globe who may need to reach a diverse array of clients who cannot travel for in-person services.

Alternative Ways to Work

In years past, people often grew up with the idea of working a 40-hour week in their jobs—that just seemed to be the natural order of things. Of course, people in certain jobs (e.g., physicians, nurses, plumbers, police officers) continued to work odd schedules, but many people assumed they would have "regular" weekday jobs. Perhaps nothing else in the career world has changed as much as the way we work, e.g., the "gig economy" (Kessler, 2018; Semuels, 2018), and this has implications for strategic career planning services. Work patterns include options such as flextime, part-time, job sharing, temporary, and home-based work/telecommuting patterns (Reardon et al., 2022). One example of this phenomenon is the proliferation of *precarious work*. This is defined as work that is uncertain, unstable, and insecure where employees assume the risks of employment and receive limited social benefits or protections from employers or the government (Blustein, 2019; Kalleberg, 2012). In precarious work, workers are increasingly defined as independent contractors who handle all the risks associated with their employment. The development of such working arrangements has been influenced by technology and globalization. There are abundant implications for career services inherent in this area of social change.

Changing Family and Work Roles

Gender roles within the family have shifted over time in relation to work (Schultheiss, 2020; Tang, 2019). Women have shifted from focusing specifically on the needs of the home and entered the workplace. Over the past 60 years, women have increasingly taken jobs outside the home (Bureau of Labor Statistics, 2022; Yellen, 2020). In some cases, men have opted to stay at home and devote more time to childcare (Kelly, 2022). The dual-career family, or in some cases the dual-earner family, where both individuals in a relationship are working outside the home, has had a huge impact on the way most of us work today and will work in the future (Reardon et al., 2022). All of the trends noted above point to the need for more complex thinking about how individuals will navigate various life roles and how career practitioners will help them do that. Adjusting to changes in society will require an ability to adapt and be flexible and have a tolerance for various levels of ambiguity. The evidence is clear that CIP theory, 30 years from its "birth," can continue to play a role in helping individuals to develop new schemata for solving career problems and making career decisions as they navigate career and family roles.

Implications

Social trends such as these four will continue to have an impact on the nature of career services. While early literature described how career services could be both high tech and high touch (Pyle, 1985), recent events have illustrated how much can be accomplished without face-to-face interaction. While persons seeking career assistance have a wealth of resources easily accessible 24/7 (e.g., websites, computer-based guidance systems, interactive workbooks, job databases, etc.), there is still a need for career practitioners who can provide assistance in helping individuals navigate the array of information and interventions, as well as serve as a "safety net" for low readiness individuals and those who may be experiencing both career and mental health concerns. See more about this topic in Chapter 10 of this book.

In a comprehensive career center, which typically provides services in a physical location and in a virtual setting via the Web, career practitioners can expect to increasingly encounter clients who may have a strong preference for a particular type of service delivery. There may also be pressure from stakeholders (e.g., government officials, funders) and external groups (e.g., alumni, parents) for more readily accessible services. Career centers may have more staff who work remotely to provide assistance to individuals. This means that all of the career tools used in service delivery need to be adapted for virtual use. We now turn to ways in which career service providers can prepare to respond to these trends and issues.

We believe the four social trends described above will have an impact on the career development of individuals and the offering of career services to assist them (See Chapter 21 for a discussion of additional factors that will likely impact CIP theory-informed services). These trends will compel career service providers to be mindful of strategic questions such as the following:

- What is our business?

- Who are our primary clients?

- What are their needs?

- How can we as career practitioners foster decision-making skills in clients that will enable them to make informed choices as they navigate an ever-changing career landscape and seek to improve the quality of their lives?

- How do we articulate the value of our services to relevant stakeholders?

We now turn to ways in which career service providers can prepare to respond to these trends and issues.

Strategic Thinking and Strategic Planning

Strategic thinking and planning are capabilities career practitioners should possess that enable them to anticipate social and organizational changes that bear on the mission and purposes of a career service. In the conduct of day-to-day practice, these capabilities help maintain focus on important broader issues that may impact the delivery of career services in the immediate and distant future.

Strategic Thinking

Strategic thinking involves the integration of planning, leadership, and management (Cope, 1987; Haycock, Cheadle, & Bluestone, 2012; Omahe, 1982). Strategic thinking raises far-reaching issues such as the following: Are we providing the range and variety of career services that meet the needs of our targeted clientele? Does the career services center mission complement and enhance the mission of the organization as well as the mission of other service providers within it? And related to CIP theory, are our clients acquiring the knowledge, skills, and attitudes (SKAs) that will enable them to be effective career problem solvers and decision makers when faced with inevitable career problems in the future?

Strategic thinking may be further illuminated by contrasting it with the concept of operations planning. Strategic thinking (Ballentine & Watts, 1989) may be thought of as doing

the right things (effectiveness), whereas operations planning may be thought of as doing things right (efficiency). Other contrasts between the two concepts (Cope, 1987, p. 8) are:

Strategic Thinking	Operations Planning
1. Formulation	Implementation
2. What	How
3. Where	How
4. Ends	Means
5. Vision	Plans
6. Effectiveness	Efficiency
7. Strategizing	Planning
8. Risk	Control

Specifically, strategic thinking entails a systems perspective, being intent-focused, thinking in time (i.e., gap between current reality and intent for the future), is hypothesis driven, and characterized by intelligent opportunism (i.e., being open to new experiences) (Haycock et al., 2012).

Finally, strategic thinking involves integrating three components: (a) formulating a vision of the right things to do according to the mission (strategic planning), (b) achieving consensus among stakeholders and acquiring resources to do the right things (leadership), and (c) implementing a plan to do things right (management). Thus, maintaining appropriate career services offered by a program demands that career practitioners, in addition to skillfully providing facilitative conditions and interventions to advance career problem solving and decision-making skills, must also possess the capacity for thinking strategically about the present and future services they will provide.

Strategic Planning

Strategic planning has been described as an ongoing process used by organizations to chart their future direction (Cote, 2020). Opinions vary about the usefulness of strategic planning in turbulent times, but some consider it more important than ever for today's environment (Bryson, 2018). The ultimate purpose of strategic planning is to maintain and enhance the viability of a program in a broader organizational and environmental context; that is, to maintain and even grow its mission and purposes within the organization. From an open-systems perspective (Bertalanffy, 1968; Kabeyi, 2019), strategic planning entails determining a direction of growth and development internal to the program in relation to the forces and direction of change in the near and distal external environment, so as to enhance the position of the program in the inexorable competition for resources in the ecosystem. Further, strategic planning requires a vision of the future, while being mindful of the evolving relationship between the internal program environment and the ever-changing external environment. Often, the formulation of a

vision involves tapping into intuition, opinions, and qualitative information more than information from empirical data used in operations planning. In other words, a vision is created more than derived. Thus, strategic planning requires a forward-thinking and proactive approach to evaluating the existing mission, purposes, and service offerings of a career service program with an eye toward further development in the direction of the vision.

Strategic planning is also an organizational problem solving and decision-making process, and therefore amenable to analysis within the framework of CIP theory. The strategic planning process, as outlined by Bryson (2018), as well as Cope (1987), can be embedded within the CASVE cycle, while the members of a strategic planning task force or committee possess the knowledge and capabilities contained in the respective domains of the Pyramid of Information Processing. Thus, the members possess self-knowledge and organizational knowledge at the base, problem solving and decision-making skills (presented below) at the mid-section, and the chair of the committee provides the executive function at the apex by organizing and leading the group through the process.

Why Strategic Planning is Necessary

Ultimately, as a process, strategic planning serves as a mechanism or means for building consensus (or buy-in) among the stakeholders of a career service program regarding the direction of its future growth and development. Furthermore, the output of the strategic planning process is a document containing the mission statement, goals and objectives for each of the purposes within the statement, and implementation strategies and performance indicators for each objective. This document serves as a foundational resource, guide, and reference for the making of important and even critical decisions regarding the maintenance and growth of a career service. Three examples of uses of a strategic planning process are as follows.

Preparing an Annual Budget for a Career Service

Each year, a career services director prepares an operating budget to be submitted to an administrator in charge of an organizational unit containing the service. The request for funds is based on the need for resources to accomplish the objectives for the coming year as detailed in the strategic planning document. Included, along with the proposed budget, is an evaluation of the attainment of the current year's objectives along with excerpts of the strategic planning document to place the proposal in the context of an overarching strategic plan. Often, the administrative supervisor, typically a dean or vice president in charge of the service has participated as a stakeholder in the development of the strategic plan.

Turnover in Leadership

An unavoidable reality is that career center directors leave their employment for a variety of reasons (Sampson, 2006), including professional advancement, retirement, and burnout. The hiring of a successor can be fraught with challenge and uncertainty. If there is an existing strategic plan, the outgoing director, as a leader, has played a key role in the formulation and execution of it. A new director may have a unique perspective on the assessment of the organization, have a different vision, and view the existing mission and purposes differently than the predecessor, in which case a new strategic planning process should begin immediately upon assuming the office.

Sudden Environmental Changes

The broader socio-political environment at times presents sudden circumstances that require an adaptive response. One example is from the State of Florida, where a previous governor signed into law a statute that the universities of Florida would receive supplemental funding if 60% or more of the baccalaureate graduates of degree programs attained full-time employment in an occupation directly related to their degree within six months after graduation. The Florida State University Career Center was immediately called upon to serve as a resource to assist academic departments in attaining this standard. The response by the Career Center was to engage in a strategic planning process to formulate an array of career services and programmatic interventions to assist academic departments and programs in meeting the 60% employment standard. The offering of career portfolios beginning in the freshman year, the hiring of career liaisons to serve as consultants to department faculty and students in preparing programs of study with appropriate internships, and resume construction and review workshops for students were instituted by the Career Center to address this prioritized organizational need.

These are examples of how strategic planning can serve as a valuable process for enabling career service programs to meet internal and environmental forces and opportunities for growth and development. The integration of continuous improvement approaches with strategic planning makes it easier to maintain a regular strategic focus in a career service organization (Sampson, 2006; Sampson & Lenz, 2023).

Guidelines for Strategic Planning Based on CIP Theory

Strategic planning may be thought of as a systematic problem-solving and decision-making process pertaining to identifying and addressing the most important long-term issues facing an organization and its future. CIP theory offers a conceptual framework, employing the phases of the CASVE cycle, for identifying, framing, and acting on strategic issues beginning with the Communication phase and ending with the Execution phase as described below.

Communication

There are two components to the Communication phase with organizations, the (a) organizational assessment and (b) visioning.

Organizational Assessment

As in the use of CIP theory with individuals, the Communication phase entails becoming fully in touch with broad and relevant aspects of organizational functioning and behavior, often referred to as *organizational assessment*. A strategy for assessing an organization is to thoroughly and critically examine its strengths, weaknesses, opportunities, and threats, (Benzaghta et al., 2021; Sampson et al., 2004), known as a SWOT analysis. An important element in conducting a SWOT analysis is to include a broad representation of stakeholders in a strategic planning task force that includes program personnel, former clients, supervising personnel, employers of students, and representatives of national professional societies. The task force should be composed of as many as 10 so as to form two nominal participant groups of five. Each group participates independently in taking SWOTs.

Strengths or "What is a Career Service Program Doing Right?" The two nominal groups are given such questions as, what are or should be the purposes or functions as part of the

mission of the Career Service? Which of these are being performed particularly well? Can you give examples of successful performances? Which are being performed at a satisfactory level?

Weaknesses or "What are Shortcomings?" Of the purposes a career service provides, which might be targeted for improvement? Can you cite instances where better performance is called for? From your perspective, how might each instance be improved?

Opportunities or "What Might a Career Service Consider Doing?" Are there purposes, functions, or services that could be provided by the Career Service that are not being provided? If so, what are some reasons you believe each of these purposes could be considered for enhancing the mission?

Threats or "What are the Prospects for the Continued Development and Health of the Service, and What are the Limitations Regarding the Competition for Resources?" What are circumstances or events that might result in setbacks in the successful execution of the purposes of the mission? What are back-up resources to offset the effect of potential threats?

Using information gathered from the nominal groups or supplementary interviews with non-members of the strategic planning task force, a synthesis of salient points for each of the respective SWOT elements is derived and recorded for a Strategic Planning document. The engagement in these four dimensions of organizational assessment recorded in the strategic planning document represents the "state-of-being" (CSI, Leierer et al., 2022) of the career service.

Visioning

The visioning process entails opening the mind to identify possibilities for the future of the organization unencumbered by immediate practical limitations or reality constraints. The process begins by asking the nominal groups to address the question, what are the social/economic trends that will affect the organization and career service over the next 10 years? Given these trends, what do you see the organization and career service looking like in 10 years? What are the gaps between the existing career service and the service 10 years from now? These trends and gaps are recorded in the Strategic Planning document.

Analysis

From the organizational assessment and visioning processes in the Communications phase, the objective of the Analysis phase is to identify a wide array of potential strategic issues and problems facing the career service in the quest to move toward the vision of the future. What are the key questions or issues that arise in considering the gaps between the existing state of being and the vision? Why do the gaps exist? Addressing these questions facilitates an understanding of the causes of the gaps.

An example of a gap could be, how can we provide high quality and comprehensive online career counseling services to students and alumni that are comparable in outputs and outcomes to face-to-face career counseling? Reasons for this gap could relate to societal and institutional advancements in technology, client expectations of variety in the delivery of services, online capabilities within the organization requiring further development, and a growing body of research related to how online career counseling has unique capabilities to be taken advantage of. Gap statements should be recorded in the Strategic Planning document along with a brief rationale for each gap.

Synthesis

This phase concerns the framing of 1–3 of the most important strategic issues facing the career service in the next five years from the list of gaps formulated in the Analysis phase. In selecting the most important strategic issues, they must meet the following criteria.

- The challenge or opportunity is long range, at least two or more years to address.

- The impact extends beyond the career program to department and even organizational levels.

- There will be budgetary implications and risks.

- The resolution will involve new goals, resources, policies, facilities, and staff changes.

- It is unclear what the best approach would be to resolve the issue.

- The issue requires involvement, support, and cooperation from the next level of supervision and higher.

- The consequences of not addressing the issue are a definite threat to the maintenance and further development of the career service.

- The issue is emotionally charged.

Each of the first 1–3 strategic issues should also raise the following questions: What is it about the issue that relates it to the vision, mission, purposes, and SWOTs? Who says it is an issue? What are the consequences of ignoring it? Can we do something about it? Should it be broken into two or more issues? The focus of the strategic planning task force in the Synthesis phase is on the issue(s), not solutions. There should be agreement among key supervisors and decision makers that the issue(s) is worthy of further exploration of it. The final 1–3 issues should be placed in the Strategic Planning document with important questions and caveats.

Extending the example above, the strategic planning task force ranked the offering of online career counseling to students and alumni as #1 on the list of strategic issues to be addressed in the next five years. The offering of online career counseling was viewed as a necessary added capability of the career center through extending available services to current students at their residences, students away from campus on internships, to students enrolled in overseas satellite campuses, and alumni who wish to maintain active accounts with HQU. Here, online career counseling will include not only one-session interventions, but also brief staff-assisted, and intensive counseling extending over multiple sessions.

Valuing

In this phase, the existing mission and purpose statements are examined to determine whether they should be modified in any way in light of the high priority strategic issues outlined above. Does a new purpose emerge or does the issue extend an existing purpose? What are the implications for the ways in which the existing purposes are carried out? What are the implications for existing staff, students, supervisors, alumni? What assumptions are we making to address changes to the mission and purposes? If there is more than one strategic issue, how are they ranked in terms of priorities to address them, and what criteria are used for determining the ranks? The output of the Valuing phase is a ranking of 1–3 top strategic issues which are placed in the Strategic Planning document with a rationale for their ranking.

In the example carried forward, the offering of online career counseling to students and alumni remained as the first choice among strategic issues for the HQU Career Center and the issue was placed under the purpose statement, "Provide comprehensive career services." Further, as with employing CIP theory with individuals, the conclusion of this phase is considered a key organizational choice regarding the future of the career service. However, as with individuals, an organizational decision is not made until a choice is put into action with appropriate planning, committed stakeholders, and resources.

Execution

The strategic planning task force now turns from "doing the right things" to "doing things right," and therefore transitions from strategic planning to operations planning. However, in order to do the right things, a plan must be developed to implement the desired improvements to the mission of the HQU Career Center described in the previous Valuing phase. The development and implementation of a plan is conducted in two steps, (1) develop goals and objectives, and (2) formulate implementation strategies, performance indicators, and a budget.

Develop Goals and Objectives

A way to think about these terms is that goals are broad statements of accomplishments that can be attained in two to five years, whereas objectives can be accomplished in one year, and through annual yearly accomplishments, lead to the achievement of goal. For example, related to the offering of online career counseling to current students and alumni, a goal and subordinate objectives might be as follows:

Goal. In three years, the HQU Career Services will provide the following CIP theory-based assessments online with appropriate feedback mechanisms: the CSI, CTI, VMS/VFS, and a modified version of the DSW amenable to the online environment.

Objective, first year. The CTI and *CTI Workbook* will be made available to online users since both are already developed for online usage.

Objective, second year. Develop the CSI and VMS/VFS for online usage with scoring and interactive capabilities.

Objective, third year. Develop and implement a version of the DSW with interactive capabilities.

Formulate Implementation Strategies, Performance Indicators, and Required Resources

A strategy is the sequence of events required to achieve an objective. Developing a chart with a listing of milestones with dates of achievement is a useful planning technique for accomplishing an objective. Performance indicators are observable and measurable achievements that signal the attainment of an objective. A proposed budget contains the add-on costs to implement each objective to reach a goal. One must be mindful that any additions or modifications to a career center's mission and purposes typically carry new operating costs that must be absorbed by the institution (see Chapter 19). Sometimes, however, there are external public and private funding agencies that can support the development and implementation of new advancements in career services, particularly to support clients with unique needs and challenges.

However, once the funding period for development and implementation is over, the home institution must pick up any increases in operating expenses which must be anticipated by supervisors and decision makers. If a strategic planning task force member has had experience seeking, obtaining, and administering external grants, this person can be very helpful in developing a proposal for seeking internal or external support for implementing the desired change in the mission and purposes of the career service.

One option for planning implementation strategies is to use an implementation model as a starting point. Sampson and Lenz (2023) provide an implementation model for career interventions that includes the following eight steps:

1. Evaluate Current Career Interventions

2. Select, Adapt, Revise, and Develop Improved Career Interventions

3. Integrate Improved Career Interventions with Existing Career Interventions

4. Train Staff in Pilot Sites

5. Conduct Pilot Testing

6. Train All Staff Members

7. Deliver Career Interventions

8. Conduct Ongoing Evaluation and Continue Accountability Tasks

Organizational Context and the Implementation of a Strategic Plan

As described above, strategic planning is a problem solving and decision-making method according to CIP theory by which a strategic planning task force evaluates and develops the mission and purposes of a career service. In conducting the strategic planning process, a task force must be mindful that this process occurs within the mission, capabilities, constraints, and resources of a broader organization, whether it be a non-profit educational institution, government agency, or a for-profit corporation. Therefore, there are inevitable limits and boundary conditions that must be kept in mind as a task force engages the strategic planning process. The first of these boundary conditions is the realm of strategic issues to be explored.

Strategic Issues

The following are examples of strategic issues related to the boundaries of a career service within a postsecondary setting: Should career services be offered within an array of general counseling services under a single administrative unit, or a completely separate unit with its own director and budget? Should a career service offer both in-person services as well as online services including in-depth career counseling? Should a career service include freshman orientation or career advising? Should it include employment services and experiential learning opportunities? Are career services integrally involved with the general education program through the offering of a career development course for academic credit? How should career services align with the institution's broader goals to ensure student success (e.g., https://strategicplan.fsu.edu/student-success/) and engagement? Should the career service provide a full range of career services to alumni? Should the career service form a special relationship with the athletic department to facilitate career decision-making and employment of student-athletes?

Examples of strategic issues in for-profit settings might include: Should career services be offered in-house or contracted out to independent service providers? Through which organizational department should career services be provided? How are career services integrated with personnel recruitment, selection, training, promotion, termination, and out-placement? To what extent does the organization support older workers and retirees in their career transitions (Hirschi & Pang, 2020)? Should a career service incorporate employee assistance programs that treat alcoholism, substance abuse, or certain types of mental health issues such as depression, anxiety, burnout? Should a career service program be integrally involved with the organization's own planning and organizational development?

In both educational, agency, and corporate settings, strategic planning should provide a method for setting boundary conditions in the offering of services in relation to support services offered by other programs and departments within an organization. A CIP theory-based strategic planning process would be amenable to both settings**.**

The Client Population

Boundary conditions also define those individuals who are targeted to receive services. Clients are those persons who meet the eligibility criteria and choose to avail themselves of the career services offered by a program. We find it helpful to distinguish between primary and secondary clients. In CIP theory terms, **primary clients** are those who are eligible to receive career services that ultimately facilitate the development of career problem solving and decision-making skills; for example, currently enrolled students, faculty, employees as well as persons who are not regular members of the organization such as alumni and "friends of the organization." **Secondary clients** are those who are affected by the primary client's changed capacity for career problem solving such as family members, co-workers, and supervisors**.** An issue to be resolved in the Execution phase of the CASVE cycle in strategic planning is the determination of who is eligible for services at no charge, who is assessed a fee for services, and how much will users be charged.

Resources and Services Offered

Having established the mission and purposes of a career service, as well as the target client population served, the question now becomes, from a CIP theory-based perspective, what career interventions will clients be able to access to help them acquire self-knowledge, options knowledge, decision-making skills, and manage metacognitions to enhance their readiness for making informed and careful career decisions? Consideration of the critical ingredients in career interventions may be an important consideration here (Brown et al., 2003; Sampson et al., 2020; See also Chapter 7). A career services practitioner should have immediately available, resources for assessing readiness for career decision-making and career interventions (see Chapter 4) to enhance self-knowledge (e.g., interest inventories, skills assessments) and options knowledge (e.g., occupational information), guidelines for progressing through the CASVE cycle (e.g., handouts depicting the cycle, and an Individual Learning Plan), to inform employment seeking (e.g., resume and interviewing guides), and mechanisms to facilitate self-awareness as a career problem solver (e.g., the *Guide to Good Decision-Making Exercise*). An additional consideration in the Execution phase is which resources and interventions will be made available in virtual formats. Personnel costs and fixed and variable expenses must also be analyzed with appropriation strategies formulated.

Effectiveness of Implementing the Strategic Plan

Strategic planning is linked to the evaluation and accountability of a career service program through CIP theory's paradigm. As stated many times in this book, a key aim of CIP theory is to not only provide a framework for career problem solving and decision-making in the present, but to create learning experiences that enable clients to acquire transferable career problem solving and decision-making skills that can be applied to future career decisions. A complete programmatic evaluation and accountability system, based on CIP theory, was presented in the preceding chapter, Chapter 19. Nevertheless, the Execution phase of the strategic planning process calls for the identification of performance indicators that can serve as benchmarks of success in implementing a plan for organizational development. For example, the National Association of Colleges and Employers (NACE) provides a workbook (NACE, 2019) that can be used by career services offices to evaluate their programs against NACE standards. The following are examples of key questions to be addressed in evaluating the effectiveness of the implementation of a plan.

1. To what extent were the intended goals and objectives of the plan achieved?

2. Were clients successful in addressing their presenting issue to their satisfaction?

3. To what extent did clients acquire mastery of the CASVE cycle skills?

4. To what extent were there sufficient resources to achieve the plan's goals and objectives?

5. Are there sufficient resources to institutionalize the new programmatic offerings beyond the design, development, and implementation phases?

6. Are there unintended effects of implementing the plan? If so, which are positive or negative?

To address each question above, a methodology, questionnaires and surveys, data gathering procedures, and the designation of a responsible individual for conducting the evaluation must be created before implementation of the plan (See Chapter 19 of this book). Additional information on the evaluation of career interventions and career guidance programs is provided by Sampson and Lenz (2023) and Whiston, et al. (2019).

Roles of Career Practitioners in a CIP Theory Environment

A CIP theory-based learning environment, with the ultimate aim of facilitating the development of career problem solving and decision-making skills, requires a variety of professional roles, each with their own knowledge base and skills. Such an environment extends beyond the more traditional one-on-one counseling relationship between a career counselor and a client intimately and privately exploring a presenting career problem (Carkhuff & Berenson, 1967; Rogers, 1962). As discussed above, helping a client solve a career problem and making a satisfactory and appropriate career decision often takes place within a career center that is based in an organizational or community context. Thus, we envision a set of professional roles conceptualized in the form of hierarchy of concentric overlapping roles. Figure 20.1 presents five roles with the practitioner role in the center, within a teacher-educator role, within a developer-designer-evaluator role, and within an ultimate strategic planner role.

Figure 20.1

Professional Roles in Facilitation Career Problem Solving and Decision-Making Skills
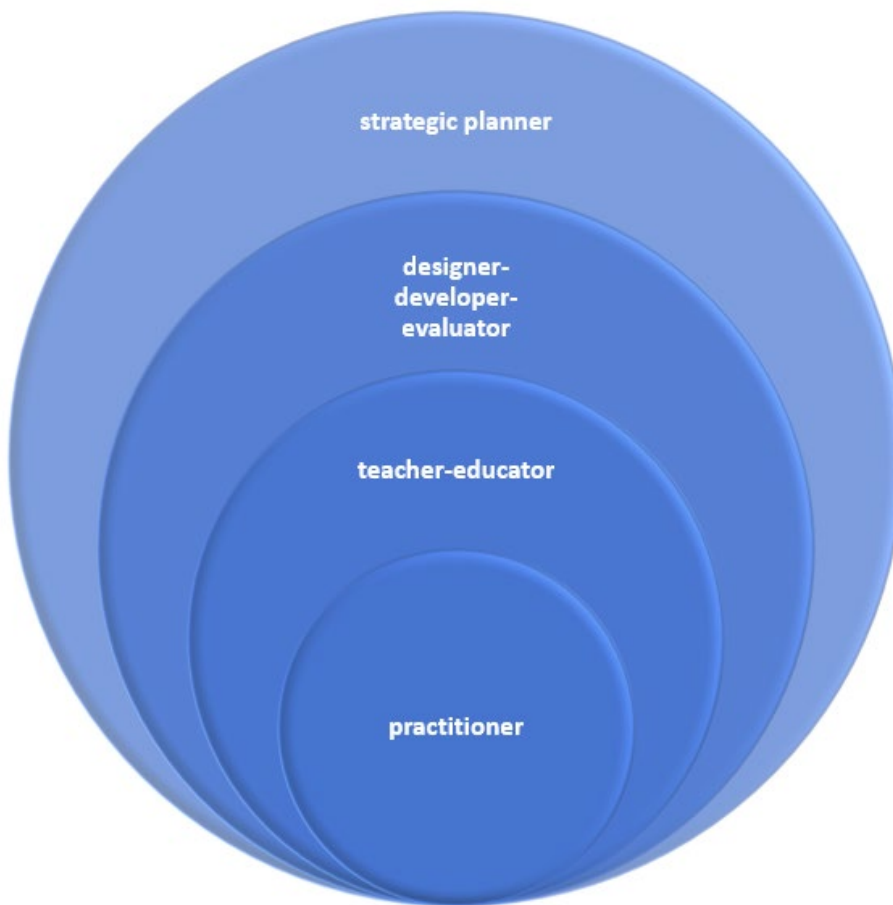
CIP Practitioner

The CIP practitioner is first knowledgeable regarding the CIP theoretical paradigm and how to (a) foster the development each of the four domains the Pyramid of Information Processing, (b) manage progression through the CASVE cycle, and (c) provide the facilitative conditions that enable the exploration of all of the dimensions of a presenting career problem (Rogers, 1957). The CIP practitioner is also well versed in career assessments that identify the level of readiness for career interventions such as the Career State Inventory (CSI; Leierer et al., 2022), the Career Thoughts Inventory (CTI; Sampson et al., 1996), and the Decision Space Worksheet (DSW; Peterson et al., 2010; Peterson et al., 2016). In addition, a CIP practitioner should be familiar with developing, with a client, an individualized learning plan (ILP; Sampson et al., 2020) that enables the client to set forth learning objectives in a sequence that leads to making a career decision and formulating a plan of action to carry it out. Further, a practitioner should be knowledgeable in the use of self-exploration inventories such as the Self-Directed Search (SDS; Holland & Messer, 2017), and a variety of ways to access occupational, educational, and employment information. Finally, a CIP theory-informed practitioner, who also has formal training as a counselor should be knowledgeable regarding the possible impact of

mental health issues (See Chapter 10 of this book) such as depression, anxiety, relationship problems, and more severe chronic mental health disturbances and how these influence the capacity for career decision-making (Lenz et al., 2010; Marks et al., 2021; Walker & Peterson, 2012).

Teacher-Educator

In CIP theory, the development of career problem solving and decision-making skills can take place in a variety of learning environments in addition to one-on-one career counseling. Individual career interventions may include self-directed learning, brief staff-assisted, and intensive career counseling (Sampson et al., 2020). Moreover, interventions may occur in large open spaces with work tables, in private counseling offices, conference rooms, in formal classrooms, and in virtual formats. Sometimes, career decision-making occurs within group settings in which clients work collectively in progressing through the CASVE cycle. With group instruction, the works of Robert Gagne (1985) provide guidance in establishing the conditions of learning with objectives and prescribed or planned learning experiences. Chapter 7 of this text presents a thorough explanation of how to prepare and deliver instruction regarding the development of career problem solving and decision-making skills in formal classroom settings. The Florida State University Career Center offers up to 5 sections of a course, Introduction to Career Development, for academic credit each semester. Career practitioners serve as lead instructors for each section with typically 20-25 students.

Designer-Developer-Evaluator

In addition to providing conditions for individual growth and learning, CIP theory-informed practitioners must also think in terms of offering services and programs to a diverse population of potential clients. A product of the strategic planning exercise is often the formulation of goals and objectives of a new programmatic offering, such as establishing an online career counseling service for students and alumni over the next three years or increasing outreach to students who present with neurodiverse characteristics (Hamilton & Petty, 2023). At this level, career practitioners must be prepared to design, develop, and deliver effective and efficient interventions using a variety of means to help individuals enhance their career decision-making skills. Career practitioners must be able to design and develop an instructional system in which to foster certain learning objectives. In addition, practitioners must also formulate an evaluation strategy (See Chapter 19) to determine whether clients have mastered the intended learning objectives following a prescribed intervention. The design and development functions require knowledge of educational and cognitive psychology, and instructional media, while the evaluation function requires knowledge of research design and measurement.

Strategic Planner

The CIP theory-informed practitioner, as a strategic planner, focuses on the contribution of career services to the good of the organization and the community. The capabilities of strategic thinking and strategic planning are particularly relevant to functioning effectively in leadership positions within a career center. Strategic planning draws on the visions and ideals of both the organization as well as the profession of career development and counseling. As a strategic planner, a career practitioner becomes proactive in promoting the career service by constantly entertaining the possibility for extending the kinds and quality of services made available to the organization, as compared to being reactive as has been typically the case in the

practitioner role in serving drop-in individuals seeking immediate assistance with a pressing career problem. The strategic planning role, as a source of vocational meaning (Peterson, et al., 2017), also requires that career practitioners possess a strong belief in the worth of their profession for enhancing the quality of life and work in society. The strategic planner says, "I have something of value to offer individuals that deserves an important place in the functioning of the organization." Professional staff members, and especially the career services director, although sometimes focusing inward to assure the effectiveness of service delivery, should also concentrate on how well the career service, through its array of services and programs, is serving the organization and the community, and should be inexorably attuned to exploring the possibilities for extending the range of career service offerings that are an integral part of the core functions of the organization.

Role of Public Policy in Strategic Planning

According to the OECD (2004), career guidance contributes to three main policy goals: (1) promotion of lifelong learning and effective functioning of the national education system, (2) effective functioning of the labour market and through this the economy, and (3) as a long-term outcome, social equity. These three categories are widely used as a framework for describing the policy rationale for career guidance systems and policy development. However, the balance between and within the three categories varies across countries (OECD, 2004; Watts, 2014; Watts & Fretwell, 2004).

In many countries, career assistance is acknowledged as a shared policy responsibility across education, training, youth, employment, and social affairs policy. Key instruments in informing and governing career assistance policy development include regulations, economic incentives, and information. Regulation includes directives, guidelines, norms, rules and procedures which support career assistance for citizens. Economic incentives refer to resources provided by national or international donors to enable the application of the regulations. Information refers to media used by governments to communicate policy messages for stakeholders, providers, and citizens (McCarthy & Borbely-Pécze, 2021). In accordance with shared policy responsibility, career services tend to be located in schools, vocational education and training, higher education, adult education, employment and youth services. However, individual careers involve construction of pathways across these sectors as a continuum, on a lifelong basis.

The importance and utility of career assistance is acknowledged worldwide (Athanasou & Perera, 2019). However, a typical challenge in establishing coordinated career assistance is an overall lack of shared understanding among policy makers and stakeholders of the primary purpose of these services, operation of the services, and their desirable outcomes. Countries vary in their degree of centralization and government sectors can have different structures and specific mandates based on regulations defining their funding, methods, and responsibilities (ILO/ETF, 2021; Barnes et al., 2020; Cedefop, 2011). Challenges can be connected to a lack of accurate labor market information, fragmented service delivery and differences in the operating cultures between different sectors responsible for the service delivery (e.g., education, employment, youth, social and health). Inconsistency between sectors often leads to competition rather than a coordinated, quality service. Absence of jointly agreed quality standards for career assistance may lead to general low quality of provision, low labour market and learning relevance, as well as unethical treatment and/or discrimination (ILO/ETF, 2021).

The potential of technology is also constrained by fragmented coverage, equipment cost and the limited information and computer technology (ICT) skills of citizens and career practitioners, as well as inadequate integration of ICT the career service sector (Kettunen & Sampson, 2019). Implementation of a more consistent strategic approach (Kettunen et al., 2016) requires both a jointly agreed cross-ministerial strategy for career development and a common conceptual framework for service delivery and funding, as well as a formal commitment to the sustainable development of ICT in career services. Even with coherent guidelines and strategies, implementation of ICT in career services is seen as a complex and protracted process.

A growing number of countries are linking career assistance with lifelong learning or skills strategies in accordance with the ongoing changes in society. The aim is to secure continuity between different sectors in policy development and service delivery. This implies a shift from intervention at key points in an individual's life to a lifelong perspective; and from the provision of external expert support to the individual developing and utilizing career adaptability (Brown & Bimrose, 2018; Fejes & Dahlstedt, 2019) and career management skills (CMS) (Cedefop, 2008; Di Fabio, 2019; ELGPN, 2010; Lent, 2020; Sultana, 2008). Whiston and Blustein (2013) noted the impact of career interventions, not just on the local level but as a means of preparing individuals for work in the 21st century.

The enhancement of career assistance is aligned also with the [United Nations Sustainable Development Goals (SGDs)](). Individuals' capacities and knowledge to make informed plans and decisions on learning and job are pivotal in ensuring inclusive and equitable quality education and in promoting lifelong learning opportunities for all (SDG 4). Reskilling and improving skills utilization in enterprises contributes to inclusive and sustainable economic growth, full and productive employment, and decent work for all (SDG 8). For the individual, improving resilience through skills means reducing dependence on market conditions and increasing one's potential to navigate through life and professional transitions (European Commission, 2020).

Differentiated Service Delivery and Public Policy

The models and interventions in career development are often influenced by the career theory or theories the service providers use. Theories influence the services through the design and use of assessments, career development processes and the availability of information and instructional resources (Sampson, 2008; Sampson & Lenz, 2023). In addition to theories, a common denominator for the design of career services is the time available for career interventions. Often the funding that is available for career services is limited and there are expectations from policy makers that the existing funding should be used as cost-effectively as possible (OECD, 2004).

In meeting the increased demand for career assistance, a number of countries have realized that using differentiated career guidance interventions to improve access is a key issue. The classification of user groups can be elaborated in accordance with national contexts, and differentiated services seem relevant in meeting the needs of different user groups/audiences. In providing services, information advisers, learning advisers and career advisers have different levels of qualifications to serve the needs of the different users (ELGPN, 2010). For example, in Estonia the differentiated service delivery model according to CIP theory was applied in 2010 as an underlying theoretical principle in the design of publicly funded regional "Rajaleidja" career centers (Sampson, 2010).

The effective design and implementation of career services is a collaborative effort among service providers from different sectors, so it is important to have a common understanding among collaborating partners and stakeholders of the purpose and strategies for evaluation and accountability of the services (Sampson & Lenz, 2023). Considering the cost-effectiveness of career services is essential as more individuals seek assistance with their career development. CIP theory provides a framework for how to have a balance on the supply and demand for services as a social justice issue (Sampson et al., 2017). The CIP theory-based approach illustrates how the choice of a particular career theory to guide career interventions (Sampson & Lenz, 2023) influences the amount of time required to deliver and supervise career interventions and the resulting impact on the supply of career interventions in relation to the demand (Sampson, 2008; Sampson et al., 2020).

Since the beginning of the 2000s, the models for career development have shifted from singular matching exercises into activities which are connected to lifelong development (Hartung, 2020; Kettunen, 2017; Patton & McMahon, 2014). International reviews with a number of case studies strongly indicate that the demand for career assistance far exceeds the supply of services and that citizens' needs cannot be met by relying exclusively on the traditional forms of career assistance (e.g., Barnes et al., 2020; ELGPN, 2010; Zelloth, 2009). In meeting the increased demand for career assistance, a number of countries have realized that using differentiated career interventions to improve access is a key issue (see Chapter 15 for further discussion of this topic). No service provider, professional group or organization alone can respond to the increasing needs of more diverse client groups.

Chapter 20 Summary

This chapter reviewed the concepts of strategic thinking, operations planning, and strategic planning as ways of thinking about the formulation of the intents of career services. A six-stage process was described that can be used as a guideline for the strategic planning process, in which a planning committee begins with the question, Are we doing the right things? and progresses to the question, Are we doing things right? The activity of strategic planning was linked to cognitive information processing theory and to accountability through the delineation of the client population to be served and the types of decisions the service is designed to help the clients to make. Primary clients, those who acquire new knowledge and skills, were contrasted with secondary clients, those who are the benefactors of changes in the primary clients. The effectiveness of a career services program is ultimately determined by the degree to which clients acquire new capabilities and the relevance of these capabilities to the core functions of the organization in which the career service is located. The chapter closed with an examination of differentiated service delivery and public policy.

Getting the Most Benefit from Reading Chapter 20

To effectively learn the material in this chapter, complete one or more of the following activities:

- Form a strategic planning group of five or six persons. Locate a local career services program in the community and design a strategic planning process that the service could employ.

- Locate a local career services program in your community, and conduct an investigation of how its mission, goals, and objectives were derived. To what degree were strategic planning principles used?

- Locate a local career services program in your community and describe the characteristics of its clientele. Discuss with the staff how the trends toward a global economy, technological innovation, new ways of working, and new work/family roles in the labor force will likely influence (a) the nature of the career services offered and (b) the client's consideration of career alternatives.

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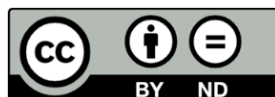
CHAPTER 21
FUTURE DIRECTIONS FOR CIP THEORY[72]

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This chapter explores the future of cognitive information processing (CIP) theory as it applies to theory development, research, and practice. As part of charting the future of CIP theory, we include content related to the future of career centers and how societal changes and events may impact the career development field. CIP theory's community of practice is committed to continually improving and extending CIP theory, research, and practice as new knowledge and events unfold in the world in which we live. After reviewing this chapter, readers will have insight into ongoing and future developments related to CIP theory, as well as knowledge of macrolevel forces that impact career development and services. Our goal is that these developments will be further articulated in future editions of this book and related publications.

Before examining future directions in CIP theory, research, and practice, we call attention to two unique considerations. First, we note that CIP theory is different in the way it is conjoined with another theory, i.e., Holland's (1997) RIASEC theory. Peterson (2022) compared and contrasted the two theories in terms of their development and contributions to research and practice, and we anticipate that these two theories will continue to be linked to one another in future CIP work. Second, we note that the dissemination of information about CIP theory, research, and practice is distinctive in the way it is regularly and freely shared with others worldwide via the Tech Center. This chapter begins with a discussion of future directions in theory development, and continues with future directions in research, future directions in practice, and the future of career centers, macrolevel forces, and CIP theory. The chapter concludes with a chapter summary and recommendations for getting the most benefit from reading the chapter.

Future Directions in CIP Theory Development

As detailed in Chapter 1, CIP theory has consistently focused on the integration of theory, research, and practice (Sampson, 2017; Sampson, et al., 2014). Recently, several members of the CIP community of practice have sought to update CIP theory with consideration of how new theory developments may impact research and practice. Carkhuff et al. (1967), in evaluating earlier vocational theories and their development over the years, noted the importance of "drawing both inductively from new bodies of stable data and deductively from already existing formulations" (p. 344). Reardon et al. (2011) suggested that "it is relatively easy to develop theory in the deductive phase because imagination and writing are involved primarily, but the development of theory in the inductive phase involves the collection of data, controlled research studies, and theoretical revisions" (p. 243).

In considering future developments in CIP theory, several important insights have been uncovered through a broad look at general psychological and sociological research with a focus on updating the cognitive science that serves as a foundation for the theory. Many of these ideas already inform how we think about research and practice from a CIP theory-based perspective. The aim is to further integrate these new concepts and perspectives in future publications. In the section below, we present a few of these new theoretical ideas, as well as future concepts that can be explored.

CIP theorists are currently working to better delineate the CIP pyramid components and the relationship among these components. As noted in Chapter 2, practice has revealed that the

boundaries among the pyramid components (i.e., executive processing, decision-making, knowledge) are not rigid but permeable. Future CIP theoretical formulations will seek to better articulate the more recursive nature of the pyramid components as well as the CASVE cycle.

CIP theory-based practice has always included attention to emotions, interacting mental health needs (see Chapter 10), and the diverse backgrounds of those with whom we work (see Chapters 6 and 10). The future of CIP theory will seek to more explicitly integrate consideration of these important person-centered aspects into theoretical statements. For example, how is one's ability to gain and reflect upon self-knowledge impacted if significant mental health concerns are present? How does the Valuing phase of the CASVE cycle differ across cultures or personal identities?

Finally, to assure a theory's continued relevance, information from varied research perspectives must be reviewed and integrated. Various scholars have stressed the importance of integrating ideas from other disciplines as an essential component of vocational psychology (Blustein, 2019; Brown & Lent, 2020; Reardon et al., 2011). Reardon et al. (2011) noted the challenges of establishing and maintaining interdisciplinary collaborations to advance science and practice in vocational psychology. The authors recognize the importance of revisiting the original formulations and basic science (e.g., cognitive science, development, learning theory) that originally informed the theory's development. In addition, future updates to CIP theory must consider changes in our understanding of how individuals acquire knowledge about self and options, engage with decision-making, and consider executive-processing tasks.

CIP practitioners and researchers should expect to see new information about the development and further articulation of CIP theory in the coming years. Our goal with these future developments is to maintain the parsimony of our theory, continue to provide content that informs the work of career practitioners, and provide springboards for future research. The next section provides a preview of some initial formulations of where CIP theory-based research might head in the years to come.

Future Directions in Research

Related to the section on the future of CIP theory, ongoing CIP theory-based research seeks to focus on deepening and expanding our current understanding of key elements of the theory (i.e., the pyramid, CASVE Cycle, readiness model, differentiated service delivery model). Several potential avenues of CIP-related research exist, including areas of assessment, research and statistical design/approaches, diverse groups, settings, and integration of knowledge from various fields into research questions. Current measures used in assessing CIP-related constructs, such as the Career Thoughts Inventory (CTI; Sampson, et al., 1996a), will need to be updated, re-normed, and re-evaluated for different groups. For example, Hayden and Osborn (2020) conducted research that explored relationships among negative career thoughts and career decision state with affective conditions including worry and emotionally-laden CTI items (e.g., "I feel anxious" or "I feel so overwhelmed"). Their research provided preliminary support for using these CTI items "as a gauge of one's emotional state in relation to career development" (p. 172). Other assessments e.g., CSI (Leierer, et al., 2022), CASVE-CQ (Werner, et al., 2021), a questionnaire that assesses skills associated with the CIP pyramid components (Osborn, et al., 2020), and the Career Outcomes Metacognition Scale (COMS; Osborn, et al., 2021) have been developed or are in development (e.g., a measure of capability/complexity) and need continued validation for various groups.

Much of CIP theory-based research has focused on traditional research designs and statistical approaches, e.g., correlational design and MANOVAs, regressions, and the like. The use of other designs such as qualitative approaches or structural equation modeling to explore potential relationships would provide more context to CIP theory-based constructs and their relationships. Longitudinal studies are needed to examine developmental differences and the longer-term impact of CIP theory-based interventions (Bjornsdottir, 2018). For example, the CASVE-CQ results could be examined across time for progress in decision-making at different developmental stages and intervention points.

The understanding of diversity factors, and how they are impacted by societal events and other changes, will continue to be an important venue for future research. Specifically, findings related to a particular population from prior research may not reflect what is true for that group today. Also, exploring how CIP theory-based interventions can be applied in various settings (e.g., career centers, community agencies, mental health centers, schools, hospitals, rehabilitation facilities) or using alternative formats such as virtual services, telehealth, social media, etc., can help advance the knowledge base related to service delivery. Intervention research that includes, but also moves beyond undergraduate career courses as an intervention, is important. Such efforts could further inform evidence-based approaches to reducing negative career thoughts, building and clarifying self- and options knowledge, helping individuals move through the decision-making process, and evaluating strategies for enhancing readiness for engaging in the career problem-solving and decision-making process. Expanding exploration of both internal (e.g., psychological, biological) and external (e.g., societal) influences that impact a person's pyramid and CASVE cycle have the potential to generate useful information that will further advance CIP theory and practice. Finally, research focused on how CIP elements, such as the CASVE cycle, generalize to other types of problems constitute a focus of future research. For example, it could be helpful to understand if those exposed to the CASVE cycle in career interventions effectively use that decision-making model for future decisions, career-related and otherwise.

Future Directions in Practice

An essential component of CIP theory, since its inception, has been the focus on how the theory's concepts, assessments, and related resources can be used in practice (Sampson et al., 2000; Sampson, 2017; Sampson et al., 2020). A CIP theory-based approach to delivering career services has thrived for more than 30 years at the Florida State University Career Center (see Chapter 7). Reardon et al. (2011) described a five-stage model to illustrate how initial CIP theoretical formulations can move to dissemination, adoption, and/or adaptation in practice. As noted in Chapter 15, the CIP theory-based approach to career interventions has spread to settings around the world. The original formulations of CIP theory tools and resources have been adapted for use with diverse populations in a variety of settings ranging from K-12 schools to correctional facilities to private practice. A question to ask in this chapter is how has CIP theory-based practice changed over the years and how might it change in the future?

Virtual Service Delivery

While CIP theory, from the outset, incorporated the use of computer- and web-based resources for practitioners and clients, practitioners around the globe found themselves having to quickly adapt to virtual services and telepsychology during the recent pandemic. As described in

earlier parts of this book, practitioners at Florida State and in other settings quickly adapted CIP-based assessments and psychoeducational materials for use in a virtual format (Osborn, 2019). As Varghese et al. (2020) noted, many questions remain on how best to transfer this technology to expand its reach to a broader population. Further work is needed to understand virtual delivery's effectiveness in delivering career interventions and how to implement theory-based services.

While the ongoing impact of the most recent pandemic is unknown, the most immediate impact was the awareness of how critical it is to have strategies in place to make theory-based resources available for use by clients in a virtual format. The availability of technology made adapting some CIP theory-based resources relatively easy, e.g., creating fillable PDFs of ILPs, [Guide to Good Decision-Making Exercise](), DSW, etc. Other resources, e.g., *CTI Workbook* (Sampson, et al., 1996b), required more time-intensive labor and working closely with the workbook's publisher to follow appropriate copyright guidelines for adapting the material. While anecdotal data suggests that this transition in practice has been relatively seamless, further evaluation is needed with regard to how clients engage with these materials, and ultimately, research is needed to determine if the same outcomes achieved through a face-to-face intervention can be replicated through services delivered virtually.

Given that client requests for online services are not expected to end, it is essential to review how interventions are implemented both in person as well as online (Osborn, et al., 2021). For example, looking at how interventions such as the Career Thoughts Inventory (CTI), *CTI Workbook*, and other CIP-based interventions can be utilized in an online environment (i.e., via Zoom or other teleconferencing platforms) is an area in need of further evaluation. Despite changing environments, mental health factors continue to impact career decision-making (Marks et al., 2021). It is imperative that career practitioners have procedures in place to identify and screen for mental health concerns and refer clients to appropriate resources. Career practitioners must be mindful of how multicultural factors intersect with vocational choices particularly as clients consider the Valuing phase of the CASVE cycle (Sampson et al., 2020).

Applying CIP Theory-Based Assessments & Research to Practice

Throughout this publication, content has been shared related to how CIP theory-based constructs have evolved based on research findings and new cognitive science literature. It is incumbent upon practitioners to understand how this content might further inform and shape practice. In addition, through the CIP community of practice, new CIP-based assessments have emerged, e.g., CASVE Cycle questionnaire (Werner et al., 2021), Career Outcomes Metacognition Scale (COMS; Osborn, et al., 2021), etc. While these new assessments have generated useful research findings, there is more to learn regarding how they can best be integrated into practice. As noted in Chapter 10, there is an ongoing need to understand how mental health issues may impact service delivery. Settings that operate from a CIP theory base may want to explore how to best use additional assessments such as the NEO (McCrae & Costa, 2010), the Beck Depression Inventory (Beck & Steer, 1987), Penn State Worry Questionnaire (Meyer et al., 1990), along with CIP theory-based assessments to obtain a more holistic picture of a client's situation. Similarly, it may be useful to look at how positive factors such as career confidence, hope, etc., are related to having fewer negative career thoughts or reporting higher levels of vocational meaning.

Chapters 6 and 11 described diversity considerations with respect to CIP theory and CIP-based interventions in practice. Given that our understanding of individual and group differences continues to grow, research into this area must also continue, whether in respect to understanding how different groups experience the pyramid or navigate the CASVE cycle, how they might respond to CIP theory-based assessments and interventions similarly or differently, or factors impacting their readiness to engage in the career decision-making and problem-solving process. Understanding a person's CTI scores or career problem within their personal and social context will enable practitioners to respond in more culturally sensitive and supportive ways.

Finally, as noted frequently in the media, advances continue to emerge related to the use of artificial intelligence (AI) in a wide range of fields (Kochhar, 2023). Little is known about how counseling in general, and career interventions in particular, will be impacted by this form of technology. As Westman et al. (2021) noted, "only limited research has been conducted on using artificial intelligence to support guidance across higher education and working life" (p. 44). Wilson et al. (2022) discussed how AI can be used to expand the delivery of career information and create greater access for clients. A suite of AI applications for career guidance tasks such as resume critiquing and interviewing are already available and could be employed when staffing resources are low (Matkin, 2020). CIP theory's approach to service delivery and practical concepts have the potential to be adapted for applications using AI, thus further extending client access to services, assessments, and information resources.

Future of Career Centers, Macrolevel Forces, and CIP Theory

It goes without saying that the evolution of CIP theory, research, and practice will be influenced by the settings where it is taught, researched, and applied to practice. In addition to factors associated with the design and delivery of career services in various settings, there is a wide array of external or macrolevel forces that will affect how individuals live and work (Reardon et al., 2022). This section will explore some of these issues in relation to future developments of CIP theory.

Future of Career Centers

Garis et al. (2012) traced the history of career services beginning in the 1900s, through its gradual establishment as an essential aspect of higher education institutions. As noted earlier, CIP theory originated in a university-based comprehensive career services setting (see Chapter 1). Chapters 16 and 17 provide information on the development of this career center, including a personal reflection by one of the original theorists (see Chapter 17). We use the term *career center* to refer to the organizational entity (space plus personnel) in which career services are offered. It could be an administrative unit of an organization, e.g., school, business, agency, library, that employs staff who deliver a variety of career programs and services.

The Florida State University Career Center, where CIP theory originated, provides the full range of essential services associated with a comprehensive center (Osborn et al., 2018), including counseling and career advising, experiential learning opportunities, and employment services (Hoover et al., 2013). The Career Center's mission aligns with that of the institution's mission related to instruction, research, and services. CIP theory-based interventions and practice span the range of services offered by a career center, from direct services, to "trying out" career options to seeking employment or advanced education. The CIP theory-based career planning

class includes content that covers this range of topics and is continuously updated to reflect future trends and social forces.

A variety of sources have speculated on what career services might look like in the future, especially those based in higher education settings (Buford, 2023; Busteed, 2020; Helbig & Matkin, 2021; NACE, 2022). The extent to which CIP theory is applied in a career services setting may be influenced by the mission of career services and where the services are administratively located (Garis et al., 2012; Helbig & Matkin, 2021; NACE, 2022). For example, a career services department based in an institution's development unit may be more focused on employment outcomes and the financial resources that come with close ties to employing organizations. Career centers with this model can assist clients in making informed employment decisions when career advisors/practitioners incorporate CIP theory into their practice. A career services office that is linked with counseling and advising services, may find the application of CIP-based theory interventions more feasible and aligned with that unit's mission. Scott (2021) described the national trend in elevating career services at 12 different institutions to support the increased university focus on student success outcomes and life-long career management. CIP theory, grounded in career problem solving and decision-making skills, provides a proven theoretical underpinning for these initiatives when coupled with skill development regardless of the career center's reporting line on the organizational chart (Scott, 2021). Gordon (2006) described how CIP theory could be applied to the academic advising process. Linking CIP theory-based practice with academic affairs can provide a more seamless approach to career and educational development.

Dey and **Cruzvergara** (2019) addressed five future directions in university career services that included: 1) systemically integrate into academics. 2) build scalable structures. 3) teach life design + work skills. 4) measure impact over input. 5) redefine the narrative. Much of Dey et al.'s (2019) future of career centers' discussion supports the application of CIP theory. For example, it is critically important for university career centers to be designed and offer programs based on theoretical underpinnings such as CIP. In offering theory-based programs and services, career centers benefit from added credibility with academic affairs. As Dey et al. (2019) noted, the expected future trend is for additional alignment of career centers with academic affairs.

Dey et al.'s (2019) discussion of building scalable structures is particularly supportive of CIP theory. They point out the disadvantages of career centers deploying budgets towards staff and resource-intensive services such as coaching appointments that serve only limited student populations. They note further that with limited resources career professionals must rethink core structures and deploy staff most efficiently in delivering content and education en masse while ensuring that only students who need individual help the most are served through individual one-on-one services. These suggested future directions for university career services are dramatically consistent with CIP theory and the differentiated service delivery model proposing self-help and information, brief staff-assisted, and limited referrals for individual career counseling. Additionally, in suggesting the instruction of success skills through career centers, Dey et. al., (2019) challenged the application of outdated models of traditional counseling approaches. In short, Dey et. al.'s (2019) discussion of the future direction of career centers supports the foundation and premise of CIP theory in providing scalable cost-effective services in delivering the right resource used by the right person with the right level of support at the lowest possible cost (Sampson et. al., 2020).

As noted in Chapter 10, the extent to which CIP theory's model of linking career and mental health services will be influenced by a variety of factors, including organizational philosophy, staffing and training, and related resources that can support this more complex level of service delivery. Having a theory-base for career services, which is supported by research, provides a rationale for career center staff to be at the table when discussions of integrating curriculum and learning outcomes to support student success are the focus. Finally, CIP theory-based interventions and related research document their positive impact on students' career decision-making, which in turn supports student retention and successful outcomes related to employment. Beyond the walls of institutions, theories must consider the extent to which macrolevel forces may shape the theory's evolution. These forces as they relate to CIP theory, research, and practice are discussed in the section that follows.

Macrolevel Forces and CIP Theory

Many of the forces at play in the early 20th century remain evident in contemporary society, including the assimilation of newly arrived immigrants and refugees, individual difficulties in finding employment, gaps in worker skills and job requirements, training career practitioners, discrimination in hiring, new ways of working in organizations and industries, and more. Many of the conditions that led to the development of CIP theory are still evident in society and continue to be a focus in the vocational psychology field. However, several new elements are currently present that were not affecting the field in the past, and these new conditions are likely to impact future directions of CIP theory, research, and practice, as well as approaches to career development more broadly. Some of these influences were also explored in Chapter 20 with regard to how they may impact strategic planning in career services. In the section below, we focus on three macrolevel conditions; COVID-Pandemic, climate change, and the interaction of politics and mental health, that have the potential to impact CIP theory future developments. We acknowledge the many other macrolevel forces exist (e.g., automation, AI, global economic changes, etc.) that we were not able to fully explore in this section, but certainly merit future consideration with regard to how they impact individuals and their life roles.

COVID Pandemic

The coronavirus producing COVID-19 profoundly changed the way people work and live, and has introduced uncertainty and change in organizations, lives, and careers (Blustein et al., 2021; Kniffen et al., 2021). This external phenomenon continues to have important effects and these will likely continue into the foreseeable future. Virtual teamwork, social distancing, loneliness, working from home, and job burnout and turnover are just a few of the many issues reported in popular media and scholarly literature. Moreover, Felsenthal (2021) noted that remote work brought on by the pandemic has fundamentally changed how many workers experience their jobs, and they are reevaluating how much time they want to spend in an office, where they want to live, what kind of organization they want to work in, and this is especially true for women. Lipman (2021) reported that millions of workers are reassessing their ideas about jobs, e.g., switching careers, working remotely or in the office. Some have described this as the "Great Resignation" or "Quiet Quitting" as workers leave jobs for better opportunities (Covert & Konczal, 2022). Finally, we note that about 10% of persons sickened by COVID-19 will develop long-term illnesses that could affect their relationships, jobs, and mental health in the future (Schreiber, 2021), impacting more than 3.2 million persons.

CIP theory, with its approach to service delivery and career interventions, is well positioned to respond to these conditions. As noted earlier, CIP theory is based on learning theory and offers a model that is designed to help individuals manage career transitions and teach them how to solve career problems and make career decisions over the course of their lifetimes. In addition, CIP theory's focus on social justice positions it well to respond to higher demands for career interventions (Lenz & Osborn, 2017; Sampson & Lenz, 2023; Sampson et al., 2017). Reardon et al. (2022) provided a comprehensive discussion based on CIP theory of how external forces may shape the world of work, including pandemics, climate change, and related events.

Climate Change

There is evidence that ongoing efforts to move to a "green economy" will change manufacturing industries, farming, transportation, energy use, and a host of other aspects of social and economic life. At this point it is unclear how these changes will materialize in everyday life for individuals, but this meta force will surely affect the way people work, learn, and career (Nazareth 2022; Worland, 2021). The impact of climate change on jobs and work is likely to be far-reaching although much of it is not clearly understood at the present. Plumer and Fountain (2021) believe that climate change will be impacting our lives and work on a global scale for the foreseeable future. For example, Burzyński et al. (2022) indicated that climate change will induce a voluntary and a forced permanent relocation of 62 million working age individuals over the course of the 21st century. The implications of climate change for CIP theory and practice and the educational and career planning by individuals and organizations could be significant.

CIP theory, with its emphasis on information processing, stresses the importance of individuals making informed and careful choices (Sampson et al., 2020). An essential aspect of CIP-based service delivery is ensuring that clients have access to current career information (see Chapters 9 and 18), including on "jobs of the future." Furthermore, as noted in the previous section, when individuals' lives and work are impacted by events like pandemics and climate change, CIP theory provides an accessible and comprehensive model for solving career problems and determining next steps. In addition, CIP theory-based interventions recognize the potential for the intersection of career and mental health issues (see Chapter 10) and how global, as well as local events, can contribute to individuals needing greater assistance with issues that span personal and career concerns.

Political Trends, Career and Mental Health Issues

The field of vocational psychology and career development has generally avoided politics and related controversies in its focus on theory, research, and practice of vocational behavior. Recent years have been marked by more divisiveness and antagonism among people with differing political and social views. These issues invariably seep into all aspects of individuals' lives and have the potential to impact them in negative ways as they navigate various life roles. These events, combined with stressors such as a pandemic, may increase stress levels and doubts about the future to the point of influencing a person's ability to engage with career development tasks. Smith (2022) examined the effect of politics on the physical, psychological, and social health of American adults. The results indicated that large numbers of Americans reported that politics was taking a significant toll on a range of health markers—everything from stress, loss of sleep, and an inability to stop thinking about politics. The potential negative impact of politics on

mental health is likely to affect career decision-making. The evolution of CIP theory, research, and practice should include a broad lens to better understand how internal and external events, as well as the presence of mental health concerns, may contribute to client difficulties in navigating career problem solving and decision-making.

Chapter 21 Summary

This chapter aimed to provide information related to the future of CIP theory, particularly with regard to theory development, research, and practice. Several ideas were advanced related to the evolution of CIP theory constructs. In addition, a variety of research ideas and questions were posed that can be the focus of future research studies. Content was shared about the most recent developments related to CIP theory-based practice, along with potential design and delivery of future interventions. In discussing the future of CIP theory, we also shared information related to the future of career centers and how macrolevel events and societal changes might shape CIP theory. This chapter, along with the book's entire content, reflects a commitment by CIP theory's global community of practice to continue to shape and enhance the theory, with the greater goal of making the theory useful and accessible to persons seeking career assistance, practitioners, researchers, and policy makers.

Getting the Most Benefit from Reading Chapter 21

To effectively learn the material in this chapter, complete one or more of the following activities:

- Consider what you have learned about CIP theory throughout this text. What areas of further development, articulation, or knowledge do you think are important for CIP theory in addition to those mentioned in this chapter? Draw the CIP pyramid with arrows from each component that point to future areas of possible development or understanding.

- Several areas for advancing CIP research were proposed in this chapter. Which of the proposed ideas or questions are most compelling to you? Consider how you might approach a study based on that compelling idea. Share that idea with a colleague.

- CIP theory-informed practice is based on the knowledge gained through related research. What is one way your experience with CIP theory in practice has changed based on your increased understanding of theory and research presented in this text? Consider what more you may need to know about CIP theory and research to improve your practice in the future or how your organization may more fully integrate the current state of CIP theory-informed practice into its structure.

- Several macrolevel influences on our world that subsequently impact career development were presented in this chapter. What other macrolevel influences do you see as critically relevant to career development? Consider how one of the presented macrolevel influences (i.e., pandemic, climate change, politics) will play out for clients and organizations in the next 10 years.

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