The 1993 Agenda for the National Center for Research in Vocational Education.

National Center for Research in Vocational Education, Berkeley, CA.

Office of Vocational and Adult Education (ED), Washington, DC.

Apr 93

V051A30003-93A; V051A30004-93A

71p.

NCRVE Materials Distribution Service, 46 Horrabin Hall, Western Illinois University, Macomb, IL 61455 (order no. MDS-030: $4.50).

Viewpoints (Opinion/Position Papers, Essays, etc.)

(120)

MF01/PC03 Plus Postage.

Adult Education; Educational Improvement; *Educational Research; Postsecondary Education; *Research and Development; *Research and Development Centers; Research Needs; *Research Projects; *Research Utilization; Secondary Education; *Vocational Education

*National Center for Research Vocational Education

This paper contains a mission statement and overview of the National Center for Research in Vocational Education's (NCRVE) agenda for 1993. The first part outlines the goals and programs of NCRVE's six research and development areas: the economic context of vocational education; the institutional context of vocational education; curriculum and pedagogy; students in vocational education; personnel in vocational education; and accountability assessment. Projects in each of these areas are described. The second part of the paper outlines the goals and programs of the five development and training areas: dissemination; professional development; special populations; planning, evaluation, and accountability; program development, curriculum, and instructional materials. Planned projects and activities are summarized. (KC)
THE 1993 AGENDA FOR THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION

Graduate School of Education
University of California at Berkeley

Consortium Members
The University of California at Berkeley
The University of Illinois
The University of Minnesota
RAND
Teachers College, Columbia University
Virginia Polytechnic Institute and State University
The University of Wisconsin

Supported by
The Office of Vocational and Adult Education
U.S. Department of Education

April, 1993
FUNDING INFORMATION

Project Title: National Center for Research in Vocational Education

Grant Number: V051A30004-93A/V051A30003-93A

Act under which Funds Administered: Carl D. Perkins Vocational Education Act
P. L. 98-524

Source of Grant: Office of Vocational and Adult Education
U.S. Department of Education
Washington, DC 20202

Grantee: The Regents of the University of California
National Center for Research in Vocational Education
1995 University Avenue, Suite 375
Berkeley, CA 94704

Director: Charles S. Benson

Percent of Total Grant Financed by Federal Money: 100%

Dollar Amount of Federal Funds for Grant: $6,000,000

Disclaimer: This publication was prepared pursuant to a grant with the Office of Vocational and Adult Education, U.S. Department of Education. Grantees undertaking such projects under government sponsorship are encouraged to express freely their judgement in professional and technical matters. Points of view of opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy.

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MISSION STATEMENT

We envision the National Center for Research in Vocational Education (NCRVE) as serving the role of a change agent rather than simply as an analyst of current patterns, a service agency, or an advocate. Playing a role in implementing change requires some vision of what change entails. This vision is comprised of two major components, one describing what occupationally oriented education ought to be and one describing how a National Center ought to operate—especially one that operates as a change agent.

A Vision for Vocational Education

Two Goals

What should education do? And within education, what should occupationally oriented education do? In responding to these questions, we pose two goals, one individual and one social:

1. Education at all levels should prepare individuals, including members of special populations, for substantial and rewarding employment over the long run. In asking how vocational education can serve the interests of employers and the economy, to ask simply "what do employers want?" is insufficient. Instead, the appropriate questions involve what direction the economy should take and what employers need to help them move in that direction.

2. We therefore propose the following goal: Vocational education should act as a catalyst for a shift to an economy dominated by a skilled and flexible workforce—an economy that seeks a high-skills equilibrium that maximizes both global competitiveness and individual potential, an economy in which firms use more skilled and productive workers and provide the appropriate incentives for education and training—rather than an economy with low average skill levels, limited opportunities, older conceptions of work organization, and increasing inequalities in skills and education.

With these two goals for vocational education, the overarching question for the National Center—acting in its capacity as change agent—is whether specific...
occupationally oriented programs serve either or both of these goals. If programs are not serving these goals, then the appropriate questions are

- How can they change in order to do so?
- What incentives can be used to move existing institutions toward appropriate reforms? and
- What measures are available to know when reform has occurred?

Emerging Vocationalism

Over the past several years, a number of developments crucial to the future of education in general and vocational education in particular have occurred—developments that we describe as Emerging Vocationalism. The various strands of Emerging Vocationalism are consistent with and give additional content to the Center's twin goals. Emerging Vocationalism

- provides students with a broader education;
- prepares students for "careers" as opposed to "jobs";
- acknowledges that occupationally oriented capacities are learned in a variety of institutions and settings and potentially draws on all of them;
- is concerned about the transitions between these institutions and settings;
- potentially includes all students because all of them have vocational motives and need to confront the occupational choices they make;
- incorporates a revised conception of equity as equitable access to and completion of effective programs;
- focuses on both vocational and academic teachers;
- is concerned with pedagogical methods as well as content—particularly with the more active, student-centered, project-driven, and cooperative teaching methods grounded in the realities of employment;
relies on mechanisms of accountability to influence the content of programs; and

acknowledges that how employers operate must change as much as how occupationally oriented education functions.

A Vision of How the NCRVE Operates

The second major aspect of our vision for the National Center for Research in Vocational Education is to describe how it operates as a change agent, rather than simply as an analyst of current patterns, a service agency, or an advocate.

Research institutions typically produce a rather specialized form of knowledge. Practitioners do use the results of institutional research; however, they often transform research knowledge into working knowledge through teaching, administering, legislating, producing, and servicing. This working knowledge is as important as research knowledge (perhaps even more important) to effecting desired changes. Effective systems of planned change, therefore, recognize a community of knowledge producers that is much larger than universities. Effective change must do more than transfer research knowledge to user communities. It must also do more than transfer working knowledge to other practitioners and back to researchers. All such types of knowledge must be shared among all participants in the construction and use of these various types of knowledge.

We propose a national center in which research, development, dissemination, and use are integrated with practice from the outset through a collaborative change process that recognizes that all the individuals involved in the production, transfer, and use of new knowledge must participate throughout the entire process. To accomplish this vision, all collaborative change efforts of the National Center are based upon the overriding premise that a person's change in behavior—not tangible outcomes per se—is our primary focus. This strategy involves implementing four principles:

1. Change depends on building and maintaining social networks that support and expand the collaborative development and sharing of working knowledge as well as research knowledge.
2. Change requires *continuous communication* among all vocational education actors who produce and use knowledge.

3. Change is *developmental*, initially helping people to commit to change and then assisting them to implement policies and practices that accomplish the desired change.

4. Change uses *multiple, simultaneous strategies* to reach a wide range of audiences, recognizing that persons and the groups to which they belong change at different rates, at different times, in different ways, and so on.

Attention to these principles ensures that the National Center is not simply dispersing information but is also making significant contributions to the improvement of both research and practice.

The Organization of the NCRVE's Agenda

Given the two overriding goals of the National Center as it fulfills its mission as a change agent, the Center organizes its research and development activities around six substantive areas while conducting its dissemination and training activities within five programmatic thrusts.

Research and Development Areas

R&D Area I: The Economic Context of Vocational Education

R&D Area II: The Institutional Context of Vocational Education: The Emerging "System" of Education and Job Training

R&D Area III: Curriculum and Pedagogy: Innovative and Effective Practices in Vocational Education

R&D Area IV: Students in Vocational Education

R&D Area V: Personnel in Vocational Education

R&D Area VI: Accountability and Assessment
Dissemination and Training Programs

D&T Program I: Dissemination

D&T Program II: Professional Development

D&T Program III: Special Populations

D&T Program IV: Planning, Evaluation, and Accountability

D&T Program V: Program Development, Curriculum, and Instructional Materials

Descriptions of the research and development categories precede Part One of this publication, while dissemination's and training's precede Part Two.
PART ONE: THE NCRVE'S R&D AREAS

R&D Area I: The Economic Context of Vocational Education

The mission of vocational education has traditionally been viewed as teaching skills directly useful in the workplace. Therefore, understanding changes in the skills required in the workplace has always been fundamental. Additionally, the details of preparing individuals for "substantial and rewarding employment over the long run" and of "supporting a shift to an economy dominated by a skilled and flexible work force" depend on the nature of employment over an extended period of time. This first area of research, then, encompasses skill trends in the economy, the nature of subbaccalaureate labor markets, required skills and skill levels, and the support of transitions to flexible organizations of work.

R&D Area II: The Institutional Context of Vocational Education: The Emerging "System" of Education and Job Training

In a parallel fashion, vocational programs exist in a specific institutional context—a particular configuration of education and training institutions that has been developed over the past thirty years and that has become more complex (and will continue to do so) as new institutions and new programs are instituted. In such a world, it makes no sense to continue examining vocational education—or indeed any other institution—in isolation from those surrounding it. This second area of research, therefore, examines the specifics of this evolving education and training "system," including describing the variety of institutions providing vocational education and their funding. Additionally, we will evaluate the effectiveness of these "systems."
R&D Area III:
Curriculum and Pedagogy:
Innovative and Effective Practices in Vocational Education

This area examines the methods used to develop in prospective workers the various capacities they will need for employment over the long run—that is, the content and pedagogy of occupationally oriented education. In turn, this area of research and development encompasses seven distinct areas of curriculum innovation and reform:

1. The integration of vocational and academic education
2. The development of Tech Prep programs
3. The development of programs that teach students about "all aspects of the industry" they are likely to enter
4. Programs that smooth the transition from school to work
5. Efforts to develop literacy and other communications skills
6. Methods—including novel approaches to guidance and counseling—of helping students develop their occupational identities and understand the relationship between schooling and future employment
7. The development of business incubators and technology transfer for minority enterprises

R&D Area IV:
Students in Vocational Education

Examining content and pedagogy without simultaneously considering students and teachers makes little sense—since learning takes place in the interactions between students and teachers... The fourth area of our research and development agenda, then, examines students in vocational programs, including student characteristics, trends in the student composition of various vocational institutions, and the effectiveness of programs for groups of students. This area incorporates research on the special populations that are so strongly emphasized by the 1990 Amendments to the Carl D. Perkins Vocational
Education Act. At the same time, this area of research recognizes that there are many students in vocational education who are not considered members of special populations and that all students are included in the practices of Emerging Vocationalism. Therefore, research on characteristics and enrollment patterns of all students will also be conducted.

R&D Area V:
Personnel in Vocational Education

Changes in the nature of work, the work environment, and work preparation place enormous demands on educators—teachers, administrators, counselors, and other support personnel—and on the institutions that prepare and employ them. Our agenda for research and development in the area of personnel is built on two assertions:

Assertion 1: Changes in the nature of work and the workplace, together with escalating public interest in work preparation, create both pressure and opportunity for vocational specialists and advocates (teachers, administrators, and support personnel). To meet the demands will require that existing vocational educators work differently with their subjects, their students, their colleagues and administrators, and the communities that they serve.

Assertion 2: To broaden and deepen the connections between school and work will require shifts in the preparation, support, and orientation of all teachers, administrators, and support personnel, thereby requiring a strategy that links advances in vocational education with those sought by other reform movements.

The three research and development themes of this area are organized around the following:

1. The composition and capacities of the educator workforce
2. The conditions of work in schools and other institutions
3. The formal and informal provisions for the preparation, support, and retention of personnel.
In each of the themes, we sustain our twin focus on vocational educators and on the broader pool of teachers, administrators, and support personnel.

**R&D Area VI: Accountability and Assessment**

The final area of research and development focuses on accountability and assessment—the mechanisms that are increasingly used to influence the content of Emerging Vocationalism. Two questions guide NCRVE’s research agenda in this area:

1. How well are these systems of accountability and assessment working?
2. What can be done to improve their usefulness and effectiveness, especially at the local level?

This area of research encompasses methodological concerns about evaluation, performance measures and standards, new forms of assessment, and other mechanisms of accountability. Understanding in all of these arenas is necessary in order to determine whether the system of vocational education has, in fact, been responsive to the changing conditions of work analyzed in R&D Area I and whether vocational programs have met the twin goals of preparing individuals for rewarding employment over the long run and of supporting the shift to a high-skills equilibrium.
R&D AREA I:  
THE ECONOMIC CONTEXT OF VOCATIONAL EDUCATION

Project I.1  
SKILLS EMPLOYERS WANT OR SKILLS EMPLOYERS NEED?  
SKILL AND ATTITUINAL REQUIREMENTS IN THE WORKPLACE

Project Directors:  Cathy Stasz, RAND
                   John Black, Teachers College (Year 1 of 3)

Keywords:  Basic Skills, Case Studies, Cognitive Processes, Communication
            Skills, Education-Work Relationship, Job Analysis, Labor Needs,
            Generic Skills, Work Attitudes, Thinking Skills

The ability of the vocational education community to prepare students for the present and future workforce depends on a clear understanding of the skills and attitudes required in various jobs and their contribution to workplace success. Presently, educators are hampered by inadequate job analysis methodologies for assessing new conceptualizations of workforce skills, including both occupationally specific and generic skills. In addition, educators lack adequate methods for translating specific job-related tasks (defined by employers) into underlying skills and the instructional methods for teaching them (needed by educators). This study will develop a methodology to examine skill needs in a sample of firms that encompass a variety of entry-level jobs. We take a case study approach. Most sites in the sample will be linked to schools through existing school/business partnership arrangements. This three-year project will involve fieldwork in years one and two, with the third year devoted to a development activity.

A report reviewing the project’s task analysis methodologies and study design and methods will be completed at the end of 1993.

Written study findings will be disseminated through NCRVE and RAND distribution systems. In addition, we will submit proposals to present study findings at several relevant conferences, including the American Vocational Association (AVA), the American Educational Research Association (AERA), and the American Society for Training and Development (ASTD). Project staff plan to work closely with school districts and educational institutions to disseminate findings to schools and firms.
participating in these programs. Research staff also have ongoing relationships with local school districts that enable dissemination to practitioner and community audiences.

**Project I.2**

**THE SUB-BACCALAUREATE LABOR MARKETS: EDUCATION, EMPLOYMENT, AND TRANSITIONS**

Project Directors: Jacob Klerman and Lynn Karoly, RAND  
W. Norton Grubb, University of California at Berkeley (Year 1 of 2)

Keywords: Data Analysis, Education-Work Relationship, Labor Market, Postsecondary Education, Performance Factors, Work Experience, Longitudinal Studies, School-to-Work Transition

This project examines the sub-baccalaureate labor market for which both secondary and postsecondary occupational programs prepare students. The research plan has two stages. The first stage will analyze the dynamic patterns within labor markets as individuals move among jobs and between education and employment, using three complementary data sets: the National Longitudinal Survey of the Class of 1972 (NLS-72); the National Longitudinal Survey of Youth (NLS-Y); and the Survey of Income and Program Participation (SIPP). The second stage will examine the wages and earnings that result from various patterns of schooling and employment.

The project will produce an interim report on employment patterns when the first stage of the work is complete.

A final report will be published through the usual publication mechanisms of the Center. In addition, we anticipate that various excerpts will be included in the Center's newsletter and knowledge synthesis publications.

Second, shorter and nontechnical versions of final reports will be created for publication in journals like the AACC's journal and Educational Leadership aimed at teachers and administrators in community colleges as well as audiences of policymakers.
Third, the results of this research will be presented at various national-level conferences such as AERA, the American Economic Association (AEA), the American Vocational Education Research Association (AVERA), the American Association for Community Colleges (AACC), Leadership 2000 (an annual conference of the League for Innovation in Community Colleges), and the Association for Public Policy Analysis and Management (APPAM).

Project I.3

TRACKING INDUSTRY BASED SKILLS CERTIFICATION

Project Director: Thomas Bailey, Teachers College (Year 1 of 3)

Keywords: Education-Work Relationship, Information Dissemination, Labor Needs, Measures (Individual), Performance Factors, Success, Skill Certification, Skill Requirements for Work

The purpose of this project will be to systematically track the development of the industry and occupationally based skills certification movement in the United States with an emphasis on how the movement can and should affect the vocational education community. This information can be disseminated by NCRVE to the vocational education community to help educators work with employers to develop effective skills certification systems and to adjust educational programs so that they can be coordinated with those certification systems.

The project will produce the first in what is intended to become an annual report based on surveys of various industry and occupationally based certification systems in the United States. The first report will survey different types of certification systems and include a detailed examination of a small number of efforts identified through the survey as particularly revealing of criteria for designing certification systems.

The reports will primarily be disseminated through NCRVE. Presentations at the AERA, AVA, and APPAM will be made.
R&D AREA II:
THE INSTITUTIONAL CONTEXT OF VOCATIONAL EDUCATION:
THE EMERGING "SYSTEM" OF EDUCATION AND JOB TRAINING

Project II.1

THE EFFECTIVENESS OF CAREER MAGNET SCHOOLS:
A FOURTH YEAR EVALUATION

Project Director: Robert Crain, Teachers College (Year 1 of 1)

Keywords: Academic Achievement, Demonstration Programs, Evaluation Methods, Integration of Vocational and Academic Education, Longitudinal Studies, Magnet Schools

This project is an experimental analysis of the effectiveness of a group of integrated vocational-academic magnet schools and schools-within-schools, here called "career magnets."

In 1991 and 1992, we studied the impact of the career magnets on ninth-, tenth-, and eleventh-grade student performance. This study will add the twelfth grade and allow us to draw the final overall conclusions about the impact of integrated vocational-academic education on school performance.

The analysis will also measure any difference in the impact of the career magnets on male and female students and on African-American, Hispanic, and non-Hispanic whites. Thirdly, the study will identify characteristics of the most effective magnet schools.

Two reports, one technical and one nontechnical, will summarize previous reports but concentrate on the new findings of this year's work. Dissemination will take advantage of the communications network of the New York City schools. First, we will brief the New York City schools administration. Second, we will push for coverage of the report in national education media and in the national edition of the New York Times. Third, we will visit other school systems and provide technical assistance to New York City staff when they are asked to brief other school systems. Finally, we will present our findings at the AVA and AERA meetings.
R&D AREA III:
CURRICULUM AND PEDAGOGY: INNOVATIVE AND EFFECTIVE PRACTICES IN VOCATIONAL EDUCATION

Project IIIA.1

ANALYZING DOUBLY INTEGRATED HIGH SCHOOL PROGRAMS

Project Directors: Robert Crain, Teachers College
David Stern, University of California at Berkeley
James Stone, University of Minnesota

Keywords: Demonstration Programs, Education-Work Relationship, Evaluation Methods, Integration of Vocational and Academic Education, Work Attitudes

The purpose of this three-year research project is to gain information on the effects of programs that are organized to integrate work experience into programs where vocational and academic curricula are integrated. This condition of "double integration" is presumed to provide greater benefits to students than either of the efforts alone. The major component of this project is the use of at least three sites where double integration can occur: New York City Career Magnet Schools and at least two other sites in other regions of the country. Structured and unstructured interviews as well as observations will be used. This project will also take advantage of a database, the Interview Database of the New York Career Magnet Experiment.

The final product for this project will be a report, an extended discussion of the promise of double integration for the social and occupational development of adolescents. The results of this research will be presented at various national-level conferences such as at AVA.
Project IILA.2

PREPARING TEACHERS TO SUCCESSFULLY INTEGRATE VOCATIONAL AND ACADEMIC EDUCATION: A CASE STUDY APPROACH

Project Directors: B. June Schmidt and Curtis Finch, Virginia Polytechnic Institute and State University (Year 1 of 2)

Keywords: Case Studies, Professional Development, Integration of Vocational and Academic Education, Vocational Education Teachers, Teaching Methods

This project will provide a set of research-based case studies related to the integration of vocational and academic education. The case studies developed for this project will be based on interview transcripts from previous NCRVE research conducted at ten schools across the United States. After initial development, the case studies will be reviewed, refined, tested in educational settings, and prepared in final form.

A set of forty to fifty case studies will be available for use in helping educational personnel, both practitioners and those being prepared to teach, to integrate vocational and academic education. In addition, a report of the product development process will be prepared.

Distribution of the case studies will be through the NCRVE Materials Distribution Service. Use of field sites during the review and field test processes will stimulate interest in the product. Presentations will be made at such meetings as the annual conferences of AVA and AERA.
Project IIIA.3

INTEGRATING VOCATIONAL AND ACADEMIC EDUCATION IN POSTSECONDARY INSTITUTIONS: INSTITUTIONAL SUPPORT AND PEDAGOGICAL VARIATION

Project Director: W. Norton Grubb, University of California at Berkeley (Year 1 of 3)

Keywords: Integration of Vocational and Academic Education, Instructional Innovation, Postsecondary Education

This research will carry out case studies in a variety of community colleges and technical institutes to examine the incentives for faculty collaboration and the integration of vocational and academic education and to examine the differences in teaching methods, status, and institutional goals that impede integration. To remedy a lack of information about community college teaching, the research itself will consist of extensive classroom observations as well as interviews with teachers and administrators in order to address a variety of concerns about postsecondary occupational education.

An interim report will be developed. Additionally, model curricula, syllabi, and other teaching materials about postsecondary integration of occupational and academic education will be distributed. These products will be published through the usual publication mechanisms of the Center. In addition, various excerpts will be included in the Center's newsletter and knowledge synthesis publications.

Shorter and nontechnical versions of final reports will be created for publication in journals aimed at teachers and administrators in community colleges like the AACC's journal and Educational Leadership as well as for audiences of policymakers.

Third, the results of this research will be presented at various national-level conferences such as AACC and Leadership 2000 (an annual conference of the League for Innovation in Community Colleges).
Project IILA.4

BUT I'VE BEEN DOING THIS FOR YEARS:
INFORMAL INTEGRATION OF VOCATIONAL AND ACADEMIC EDUCATION

Project Director: Chris A. Roegge, University of Illinois (Year 1 of 2)

Keywords: Integration of Vocational and Academic Education, Instructional Innovation

This study will identify and examine informal strategies used by individual vocational teachers to incorporate academic content into vocational courses. Through a multistage process, two sites in each of six midwestern states will be identified that are thought to integrate successfully within existing classes. The examination of these efforts will proceed via teacher interviews and classroom observations. Activities for 1993 will comprise sample selection, instrument development, and pilot testing.

A pilot test report will be produced. Individuals and agencies pursuing development or implementation of Tech Prep programs should find the results particularly useful in their planning. Dissemination of results will occur through presentations at professional meetings, through publication in research and practitioner journals, and through the formal dissemination activities of the National Center.

Project IILA.5

DEVELOPING MODELS AND A NETWORK OF INTEGRATION AND TECH PREP PROGRAMS IN URBAN AREAS

Project Director: Charles S. Benson, University of California at Berkeley

Keywords: Integration of Vocational and Academic Education, Urban Schools, Networks, Tech Prep

Working together, NCRVE researchers and practitioners will develop model urban programs that can be adapted and implemented by schools and urban areas nationwide. This project establishes the beginning of a teacher-to-teacher network on
integration and Tech Prep and utilizes electronic networking to help create a forum of
exchange between individuals with extensive program development experience and those
who are just beginning the process.

In addition to the creation of networks, the summer institutes will each generate
ten strategic planning reports from each team representing the urban school districts.
NCRVE will also publish summary results from the institutes in appropriate issues of
CenterWork and other appropriate NCRVE synthesis publications. The institute
"graduates" newsletter will be available to the NCRVE mailing list and the network of
networks.

The dissemination program for the two national urban teacher networks on
integration and Tech Prep will maintain the current membership of the original 1992
Summer Institute participants and gradually expand membership to include additional
schools and colleges from other cities. In addition, we will engage in the following
activities:

• Electronic networking through the new VocServe bulletin board system.

• Video conferencing.

• Publication and distribution of summaries of the twenty original plans, together
  with annual progress reports.

• Regional institutes under regional sponsorship, offering affiliate membership in
  the integration and Tech Prep networks.

• Presentations at national conferences such as AVA by members of the networks.

• Collaborative activities with Jobs for the Future and the Center for Law and
  Education.

• A comparative evaluation, working with the Education Development Center, of
  the Atlas Communities reform proposal (a winning design in the New American
  Schools Development Corporation "break the mold" schools grant competition)
  with the reform proposals advocated by NCRVE. The objective of this
comparative evaluation is to assess the possibility of a merger of these two main approaches.

- A national faculty from the ranks of teachers and administrators who have demonstrated leadership in the summer institutes.

Project III.B.1

TECH PREP RESEARCH:
STUDENT ASSESSMENT, EQUITY, AND EQUAL ACCESS

Project Directors: Carolyn Dornsife and Gerald Hayward, University of California at Berkeley (Year 1 of 5)

Keywords: Tech Prep, Instructional Innovation, Government-School Relationship, Student Evaluation, Equal Education, Case Studies, Surveys

The overall purpose of this collaborative project among the Tech Prep researchers at the University of California at Berkeley, the University of Illinois, and Virginia Polytechnic Institute and State University is to address the ongoing issues and questions of how the federally funded Tech Prep initiative impacts secondary and postsecondary vocational education goals, policies, programs, services, and administrative structures. Specifically, this research focuses on linkages between Tech Prep program standards and student assessment activities, including documentation of student's skills and knowledge in core curriculum and their employability level. In addition, we will identify exemplary sites and document "best practices" for recruiting and retaining women and minority students in Tech Prep programs. Finally, we will provide annual results that are immediately applicable to audiences in the field, particularly practitioners and policymakers.

The NCRVE researchers at the three NCRVE sites will coordinate data collection and data analysis activities as well as service activities and dissemination strategies. Through these efforts, the researchers will establish a reliable national database on Tech Prep programs. The database will provide the basis for collaboration on development and service activities that, in turn, will strengthen the fledgling networks of Tech Prep practitioners.
This project will produce three monographs and one research brief. One monograph will present the national telephone survey results on student assessment. A second will concern exemplary program case studies that document student skills and knowledge in core curricula and job performance measures, and it will identify and document the linkages between program standards, student proficiencies, and occupational competencies. The third publication will offer an overall summary of NCRVE and the National Assessment of Vocational Education (NAVE) data regarding student assessment. Finally, a research brief will present a year-end summary of the collaborative project results.

Six dissemination approaches will be used to obtain broad-based distribution of the research findings and final products:

1. The project's monographs, research briefs, and occasional papers will be disseminated through existing organizations for community college educators (e.g., AACC, National Council for Occupational Education [NCOE], and AVA).

2. A second important dissemination strategy will involve secondary vocational educators through the final reports and guidebooks distribution to selected AVA members. Conference presentations will be made to inform this particular target audience about the research findings.

3. The private sector will be informed through organizations such as the American Society for Training and Development (ASTD); other technical, managerial, and labor organizations will be informed about Tech Prep initiatives and their relationship to career preparation and economic development.

4. Academic educators will be informed about these research findings through the monographs, research briefs, and occasional papers being shared via conferences and journals of such groups as the American Association of School Administrators and the American Society of Curriculum Development (ASCD).

5. Research findings will appear in refereed research journals and presentations at professional meetings such as AERA and AVERA.
Finally, the researchers will collaborate with NCRVE staff in carrying out technical assistance for local consortia and state agencies involved in implementing and evaluating Tech Prep programs.

**Project III.B.2**

**TECH PREP: POLICY IMPLEMENTATION AND PROGRAM EVALUATION**

Project Director: Debra Bragg, University of Illinois (Year 1 of 5)

Keywords: Tech Prep, Program Evaluation, Quality Improvement, Outcomes Assessment, Case Studies, Surveys

This study will continue research conducted by Bragg during 1991 and 1992 that focused on state and local planning and implementation processes used to initiate new Tech Prep programs. In addition, the investigation will ascertain the types of educational and economic outcomes that are valued by key stakeholder groups, especially educators and employers, for individuals who participate in Tech Prep. Finally, the study will examine how different types of educational institutions, student populations, employers, and communities are impacted by varying definitions and implementation approaches to Tech Prep.

NCRVE Tech Prep researchers at the University of California at Berkeley, the University of Illinois, and Virginia Polytechnic Institute and State University will coordinate data collection and data analysis activities as well as service activities and dissemination strategies. Through these efforts, the researchers will establish a reliable national database on Tech Prep programs. The database will provide the basis for collaboration on development and service activities that, in turn, will strengthen the fledgling networks of Tech Prep practitioners.

This project will produce two monographs, one reporting eight case histories of local Tech Prep implementation, the other reporting survey findings on state and local Tech Prep implementation. Additionally, two occasional papers/research briefs will be created: one will summarize the Tech Prep outcomes concept map, the second will report on the longitudinal study-evaluation plan.
Six dissemination approaches will be used to obtain broad-based distribution of the research findings and final products:

1. The project's monographs, research briefs, and occasional papers will be disseminated through existing organizations for community college educators (e.g., AACC and NCOE).

2. A second important dissemination strategy will involve secondary vocational educators through the final reports and guidebooks distribution to selected AVA members. Conference presentations will be made to inform this particular target audience about the research findings.

3. The private sector will be informed through organizations such as ASTD; and other technical, managerial, and labor organizations will be informed about Tech Prep initiatives and their relationship to career preparation and economic development.

4. Academic educators will be informed about these research findings through the monographs, research briefs, and occasional papers being shared via conferences and journals of such groups as the American Association of School Administrators and ASCD.

5. Research findings will appear in refereed research journals and presentations at professional meetings such as AERA and AVERA.

6. Finally, the researchers will collaborate with NCRVE staff in carrying out technical assistance for local consortia and state agencies involved in implementing and evaluating Tech Prep programs.
Project III.B.3

TECH PREP: APPLIED CURRICULUM AND STAFF DEVELOPMENT

Project Directors: James Hoerner and Darrel Clowes, Virginia Polytechnic Institute and State University (Year 1 of 5)

Keywords: Tech Prep, Professional Development, Instructional Design, Curriculum Development, Surveys

Through the professional judgment of project staff and practitioners, this project proposes to work with practitioner-developed programs at the secondary and postsecondary levels to identify the best practices and approaches employed in the creation of applied curricula in each of the core subject areas of math, science, communications, and technology. The results of this work will be disseminated to other practitioners. In this way, practice will be linked with research, and research with dissemination.

NCRVE Tech Prep researchers at the University of California at Berkeley, the University of Illinois, and Virginia Polytechnic Institute and State University will coordinate data collection and data analysis activities, as well as service activities and dissemination strategies. Through these efforts, the researchers will establish a reliable national database on Tech Prep programs. The database will provide the basis for collaboration on development and service activities that, in turn, will strengthen the fledgling networks of Tech Prep practitioners.

This project will produce two monographs, one reporting results of on-site observations and a survey study of applied curriculum practices, the other reporting best practices of staff development for Tech Prep programs. Additionally, two occasional papers/research briefs will be created: one will summarize applied curriculum for Tech Prep; the second will report on staff development.

Six dissemination-approaches will be used to obtain broad-based distribution of the research findings and final products:
1. The project's monographs, research briefs, and occasional papers will be disseminated through existing organizations for community college educators (e.g., AACC and NCOE).

2. A second important dissemination strategy will involve secondary vocational educators through the final reports and guidebooks distribution to selected AVA members. Conference presentations will be made to inform this particular target audience about the research findings.

3. The private sector will be informed through organizations such as ASTD; and other technical, managerial and labor organizations will be informed about Tech Prep initiatives and their relationship to career preparation and economic development.

4. Academic educators will be informed about these research findings through the monographs, research briefs, and occasional papers being shared via conferences and journals of such groups as the American Association of School Administrators and ASCD.

5. Research findings will appear in refereed research journals and presentations at professional meetings such as AERA and AVERA.

6. Finally, the researchers will collaborate with NCRVE staff in carrying out technical assistance for local consortia and state agencies involved in implementing and evaluating Tech Prep programs.
Project III.D.1

DEVELOPING A PROCESS FOR CONTINUOUS IMPROVEMENT IN PROGRAMS THAT CONNECT SCHOOL TO WORK

Project Directors: James Stone and Charles Hopkins, University of Minnesota
David Stern, University of California at Berkeley (Year 1 of 3)

Keywords: Education-Work Relationship, Cooperative Education, Apprenticeships

The purpose of this project is to develop a process for continuous improvement in programs that seek to connect school to work. The project will limit its focus to programs using cooperative vocational education, youth apprenticeship, and school-based enterprises.

Project staff will provide ongoing information to interested communities of scholars and practitioners. This information dissemination will include papers and presessions at the annual meetings of AVA and AERA.

Project III.D.2

THE ROLE OF TWO-YEAR COLLEGE WORK-BASED LEARNING SYSTEMS IN SCHOOL-TO-WORK TRANSITION

Project Directors: Debra Bragg, University of Illinois
Russ Hamm, College of Lake County, Illinois (Year 1 of 3)

Keywords: Education-Work Relationship, Postsecondary Education, Demonstration Programs

This three-year research project is designed to ascertain the role America's two-year colleges should play in work-based learning (WBL) to assist youth and young adults in the transition from school to work. Focusing on documenting existing models within two-year colleges as well as developing new models, this project seeks to extend and improve school to work transition utilizing America's two-year public community, junior, and technical college system. The ultimate goal is to perpetuate WBL systems in two-
year colleges based on the sound analytical base established during the initial year of the project.

A status report on the use of WBL systems in U.S. two-year colleges will be produced. The project's monograph and related research will be disseminated through AACC, NCOE, AVA, and other organizations. Additionally, conference presentations will be made. Finally, the project's findings will be shared through refereed journals and presentations.

Project IILD.3

ANNUAL REPORT ON EDUCATION-TO-WORK TRANSITION PROGRAMS

Project Director:   David Stern, University of California at Berkeley (Year 1 of 5)
Keywords:          Work Experience Programs, Education-Work Relationship,
                    Government Programs, Tech Prep

This project will fulfill Section 404(b)(2) of the 1990 Perkins Act. This mandate states that the National Center "shall annually prepare a study on the research conducted on approaches that lead to effective articulation for the education-to-work transition, including tech-prep programs, cooperative education or other work-based programs, such as innovative apprenticeship or mentoring approaches."

The annual report on programs fostering education-to-work transition is required by the 1990 Perkins Act to be submitted to the U.S. Secretary of Education, Secretary of Labor, Secretary of Health and Human Services, the Senate Committee on Labor and Human Resources, and the House Committee on Education and Labor. The study should therefore attract considerable attention and be widely disseminated. The National Center will distribute five hundred copies to a list of state and federal policymakers, key organizations, and analysts.
This research program is comprised of three strands: (1) ethnographic case studies of selected workplace literacy programs to capture their range, review their rationales and claims, and isolate and examine exemplary practices; (2) description and evaluation of workplace literacy initiatives of secondary vocational programs; and (3) description and evaluation of literacy initiatives in postsecondary vocational settings. Initiative (1) is to begin in the first year of the project, and (2) and (3) are to follow in succeeding years.

A monograph will be produced, detailing case studies of exemplary workplace literacy programs.

The knowledge produced by this project is needed by vocational teachers, administrators, curriculum and workplace literacy program developers, employers, researchers, and policymakers. Therefore, publications will be produced that can be disseminated to these user communities through the Center's knowledge transfer activities (i.e., seminars, teleconferences, workshops, and institutes). Manuscripts will be prepared and submitted to professional vocational and educational journals. Also, proposals will be submitted to present at meetings of professional associations like AVA, the Adult Literacy Association, and AERA.
Project III.E.2

CHANGING WORK, CHANGING LITERACY?
A STUDY OF SKILL REQUIREMENTS AND DEVELOPMENT IN A TRADITIONAL AND RESTRUCTURED WORKPLACE

Project Director: Glynda Hull, University of California at Berkeley (Year 1 of 4)
Keywords: Workplace Literacy, Literacy, Education-Work Relationship

In recent years, worry about literacy in the United States has escalated with concern now extended to adults, linking perceived deficiencies in workers' "basic" and "higher order" skills to lowered productivity and a lack of competitiveness in the international marketplace. The claim is that, in order to be competitive, American industries must adapt new technologies and new forms of work organization often labeled "high performance." The demand is that schools support these changes by teaching the knowledge and skills thought to be needed in restructured, technologically sophisticated workplaces. This project, using ethnographic methods and through the study of two workplaces—one changing toward high performance, the other not—will develop a methodology for investigating literate workplace activities, seek to broaden the current conceptions of literacy, provide the education community with information concerning changing workplace literacy demands, and make recommendations about the kinds of literacy education most useful to high performance work environments.

This study will produce an interim report in 1993. Interim results will be distributed through the usual publication mechanisms of both NCRVE and the National Center for the Study of Writing and Literacy. We anticipate that excerpts will be included in various NCRVE newsletters. In addition, the results of this research will be presented at various national-level conferences and meetings of professional associations for audiences of researchers, practitioners, and policymakers.
This study investigates the effects of the integrated career focus and practices of career magnet schools on the career development process. To determine these effects, it uses a random assignment experimental design database, created by the lottery mechanism used by the New York City Board of Education to assign seats in the oversubscribed career magnet schools in New York City. The study will test the hypothesis that the career development process is more complete, relevant, and meaningful in the career magnet schools than in the comprehensive high schools that lottery losers attend and, thus, that the graduates of the career magnet schools will have experiences which help them form a clearer and stronger career identity. We will collect an elaborate set of data, using both surveys and informal interviews with students, graduates, teachers, counselors, other school staff, and administrators.

Prior to the final report in the third year, interim findings will be presented at meetings of professional organizations (e.g., AVA, AERA, American Association of Counseling and Development, American Association of Secondary School Principals). In addition, nontechnical discussions of the research will be developed for use in professional development activities conducted by NCRVE.
Project III.F.2

LESSONS FROM LIFE'S FIRST TEACHER: 
THE ROLE OF THE FAMILY IN WORK

Project Directors: Wendy Way, University of Wisconsin, Madison 
Marilyn Martin Rossmann, University of Minnesota (Year 1 of 2)

Keywords: Family Influence, Family-School Relationship, Learning Processes, Surveys

This study is designed to clarify the role of families in work-related learning. The project will examine associations between family system variables, learning processes, and occupationally relevant outcomes. Data will be collected from two national samples, one twelfth grade adolescent group (3,500) and one adult group (1,500) who are in the second year of a two-year technical college or community college program. The participants will live in five different regions in the United States.

A report, "The Family's Contribution to Work-Related Learning Among Adolescents," will be produced. Reports and the monograph will be distributed through NCRVE. Presentations will be given at national professional association meetings and national NCRVE seminars (such as satellite conferences). Additionally, articles will be written for refereed publications as well as for "trade" publications in order to reach a larger number of families and educators.

Project III.G.1

ECONOMIC DEVELOPMENT, SMALL BUSINESS INCUBATORS, AND MINORITY-OWNED ENTERPRISES

Project Director: Robert Sorensen, University of Wisconsin, Madison (Year 1 of 3)

Keywords: Entrepreneurship, Economic Development, Evaluation Research, Minority Groups

This study will examine and assess the efforts of postsecondary vocational-technical education institutions in establishing minority-owned enterprises through small business incubators. Through surveys and on-site visits, the characteristics of successful
incubators will be explored by examining existing incubators as well as businesses that have "graduated." This project will explore the success rate of minority- and women-owned enterprises as well as identify the characteristics that lead to their success.

Public-domain, NCRVE-produced materials will be developed beginning in the second year. The National Business Incubator Association, National Association of the State Directors of Vocational-Technical Education, and the National Council of State Directors of Community Colleges will be prime networks used in the project's knowledge transfer strategies.
R&D AREA IV:
STUDENTS IN VOCATIONAL EDUCATION

Project IV.1

A PROFILE AND ANALYSIS OF STUDENTS IN VOCATIONAL TRAINING:
LITERACY SKILLS, DEMOGRAPHICS, AND SOCIOECONOMIC
CHARACTERISTICS

Project Director:  Francisco L. Rivera-Batiz, Teachers College (Year 1 of 1)

Keywords:  Basic Skills, Minority Groups, Labor Markets, Program
Effectiveness, Work Experience, At-Risk Persons, Outcomes of
Education

The purpose of this project is to provide a comparative profile and analysis of the
literacy skills, demographics, and socioeconomic characteristics of individuals, focusing
on special populations participating in a variety of vocational training programs and the
literacy requirements these persons face in the workplace. The project will disaggregate
the analysis by gender, race, ethnicity, socioeconomic background, disability status, and
immigrant background. It will discern the particular difficulties young adults face in
urban areas.

This project's final monograph will state the results of the project, their
educational implications, and policy recommendations. Project results will be presented
at professional conferences, including the annual conference of the Allied Social Science
Association.
Project IV.2

VOICES OF DIVERSITY:
THE STUDENTS OF VOCATIONAL EDUCATION, 1993-1997

Project Director: L. Allen Phelps, University of Wisconsin, Madison (Year 1 of 5)

Keywords: Minority Groups, High School Students, Postsecondary Education, Postsecondary Students, Student Experience, Program Design, Work Experience

This longitudinal project will examine the experiences of 150 vocational-technical education students over a three and one-half year period. Three different age cohorts will be followed to determine how students elect to enroll, the nature and perceptions of their learning experiences, and their assessment of the benefits and shortcomings of their programs. The sample will include students from three different states, as well as students who are disabled, from low socioeconomic status families, or from non-English-speaking homes. Students will be interviewed approximately every six months and be asked to complete special surveys or writing assignments on a quarterly basis. Information will also be compiled describing the programs and institutions in which the students are enrolled.

Public-domain, Center-produced materials will be developed beginning in the second year. The project will also publish shorter and nontechnical versions of final reports in publications aimed at practitioners as well as for audiences of policymakers. Thematically focused reports and reports on special subgroups will be especially suited for journals to highlight a missing perspective in current literature—the student voice. In addition, the results of this research will be presented at several national conferences.
This project concentrates on the ways in which teachers' professional development and the social organization of teachers' work affect the form and content of vocational education in the comprehensive high school, enhancing or impeding the pursuit of vocational goals. The project employs both an individual and institutional perspective to examine teachers' work in up to four high schools that are seeking deliberately to alter the form and content of vocational education. First, it explores the perspectives, priorities, and practices of teachers as individuals and as members of departments or other collegial groups. Second, it examines the institutional structures, policies, and practices that shape daily practice, including policies and practices of professional development. Finally, it incorporates students' experience with academic and work preparation under the range of alternative teaching structures. Data collection will combine personal interviews, observations, transcripts, and documentary materials.

Public-domain, Center-produced materials will be developed in the second year. Additionally, papers based on project findings will be prepared for appropriate journals or for inclusion in books. We anticipate deliverables for audiences of practitioners and policymakers as well as participation in large-scale conferences (e.g., AVA and the Northwest Regional Education Laboratories "Work Now and in the Future" Conference). Finally, contributions to videotapes or other means of achieving widespread dissemination of findings are anticipated.
Project V.2

PREPARING A LEADERSHIP ASSESSMENT INSTRUMENT FOR PROFESSIONAL DEVELOPMENT

Project Directors: Charles Hopkins and Jerry Moss, University of Minnesota
Curtis Finch, Virginia Polytechnic Institute and State University
(Year 1 of 5)

Keywords: Leadership Qualities, Professional Development, Measurement

Prior research supported by the NCRVE has identified the attributes possessed by individuals which are substantially related to successful leadership performance in vocational education. This project will first refine the research instrument which assesses these attributes, the Leader Attributes Inventory (LAI), and then develop norms and standards for the refined instrument which will permit meaningful interpretation and diagnosis of individuals' LAI scores for subsequent NCRVE leadership development efforts. The first edition of the LAI Manual will be produced in 1993. Beginning in the second year, the research program will identify and duplicate the experiences in the work setting that best facilitate leadership development. Given the LAI as a diagnostic tool, on-the-job experiences can then be recommended for strengthening leadership capabilities.

Three avenues for disseminating the results of the 1993 project are envisioned. First, attempts will be made to report on the project's progress through presentations at meetings of appropriate professional organizations (e.g., AACC, AVA, and AERA) and through articles in professional journals. Second, researchers will continue to be encouraged to utilize the LAI and to add their findings to the growing data pool about the instrument. Third, the LAI Manual will be used by the NCRVE in its future dissemination and training activities (e.g., to diagnose the status of individuals' leader attributes and to use that information in planning and evaluating individual as well as institutional professional development activities).
Project V.3

WOMEN AND MINORITIES IN ADMINISTRATIVE AND LEADERSHIP ROLES IN VOCATIONAL EDUCATION: STRATEGIES FOR OVERCOMING BARRIERS TO ACCESS AND SUCCESS

Project Directors: George Wardlow, Caroline Turner, and Gary W. Leske, University of Minnesota (Year 1 of 5)

Keywords: Leadership, Sex Fairness, Minority Groups, Surveys

The purpose of this project is to identify successful women and minority persons who are presently in administrative and leadership roles in vocational education, to identify those unique problems and barriers experienced by the subjects in attaining these roles, and to identify strategies by which they overcame them. The project will use these strategies as a basis to posit procedures to overcome barriers, developing and testing these interventions. An underlying objective is to increase the number of women and minorities who are willing and able to accept responsibility for and who are capable of effective leadership in a variety of professional roles in vocational education such as administration, teaching, and professional organizations.

A summary report of interview and survey results will be produced in 1993. The report will include implications for practice leading to interventions.

Results of this research will be disseminated to the profession through NCRVE publications, professional journal articles, and research presentations (e.g., AVA, the University Council for Vocational Education, and AERA) and through inservice training programs for the target populations and their respective institutions.
R&D AREA VI:
ACCOUNTABILITY AND ASSESSMENT

Project VI.1

THE EFFECTS OF PERFORMANCE MEASURES AND STANDARDS ON VOCATIONAL EDUCATION PROGRAMS AND SERVICES

Project Directors: Brian Stecher, RAND
Gary Hoachlander, MPR Associates (Year 1 of 3)

Keywords: Accountability, State Standards, Program Evaluation, Performance Standards and Measures

This research is designed to provide answers to the question, What is the impact of federally mandated, measurement-based accountability on vocational education programs? In particular, what effects have statewide systems of measures and standards had on vocational programs and on the relationship between local programs and state Departments of Education? The project will be conducted in two phases. The first phase, which will last one year, will be developmental, consisting of case studies of vocational programs and state administrations in four states to develop a better understanding of the range and nature of effects arising from the implementation of systems of measures and standards. The second phase will extend this base to a broader investigation across states over a period of eighteen months.

An interim report will be produced. This material will discuss preliminary findings regarding the effects of measures and standards on vocational education programs as well as on state-local relationships.

Findings from this study will be disseminated through many different media, including formal publications, practitioner-oriented articles in the trade press, and presentations at professional meetings and at meetings of policymakers. The timeliness of this data requires that every effort be made to disseminate preliminary findings as quickly as possible. A presentation will be made at the AVA meeting as well as at a meeting of the State Directors of Vocational Education.
Additionally, an article will be prepared. This manuscript will be suitable for publication in a journal or association publication exploring the practical implication of 1993 research.

Project VI.2

BENCHMARKING BEST-IN-CLASS CAREER GUIDANCE AND DEVELOPMENT PRACTICES

Project Director: Erwin Flaxman, Teachers College (Year 1 of 2)
Keywords: Career Guidance, Career Development, Educational Quality, Evaluation Criteria, Demonstration Programs

The purpose of this project is to (1) begin introducing vocational educators to benchmarking as a fruitful and grounded strategy for setting performance goals and for identifying and implementing best-in-class practices that can move the organization toward those goals; (2) use best-in-class career development practices as the substantive example for the project's benchmarking demonstration, thus contributing to both the identification and implementation of best career development practices and to an understanding of benchmarking as an improvement process; and (3) continue developing the infrastructure to support benchmarking activities by individual schools or districts. One school will be selected with which to work. This school must be willing to both enter into a benchmarking process as well as have identified its career guidance and development of students as needing improvement. The objectives with this school are to create a benchmarking demonstration for career guidance and development practices and to generate from this experience a number of products and processes for the vocational community in general and for the career guidance field in particular.

The project will generate these products: a "Benchmarking News" series; a case study of the demonstration in order to show how benchmarking works in the context of a school and to translate benchmarking ideas now-stated in corporate language into language meaningful to educators; and a benchmarking handbook.

In 1993, the project will generate two issues of Benchmarking News to convey "learning as we go" to a wider audience, including the career counseling and development
audience. Benchmarking News will be sent to a specially constructed mailing list that includes career counseling and development leaders. Project work will be extended into the dissemination and training programs for accountability/performance measures and professional development.
PART TWO: THE NATIONAL CENTER'S D&T PROGRAMS

D&T Program I: Dissemination

The Dissemination Program operates as a change agent by organizing itself around the overriding premise that a person's change in behavior—not the transmission of tangible outcomes per se—is the primary focus. The system involves implementing the four collaborative change principles around which the Center organizes its change agency:

1. building and maintaining social networks;
2. building and maintaining continuous communications;
3. building and maintaining a collaborative change strategy which accounts for change as a developmental process; and
4. building and maintaining multiple, simultaneous strategies.

The Dissemination Program operates as a centrally coordinated collaborative knowledge-sharing network among Center staff and research and nonresearch stakeholders in the vocational education enterprise. This network translates and brokers, for our constituencies (including the seven consortium sites), R&D-based knowledge, practitioner-based knowledge, and policy-based knowledge in ways useful to them and usable by them and facilitates the movement and sharing of that knowledge among these persons. In addition, the dissemination program encourages the development of social networks among all stakeholders in a specific enterprise so knowledge is distributed and exchanged in useful, usable ways.

The Dissemination Program organizes itself around three basic functions: distribution, acquisition, and collaboration. Each of these components uses a varying blend of several approaches, including database development and use, information brokering, publications, marketing/promotion, direct-interpersonal linkages, and electronic communications.
Making education work is ultimately the responsibility of faculty, administrators, and student services personnel. In order to realize a new vision for vocational education, educators must possess the knowledge, skills, and abilities to restructure vocational and academic education. This effort requires strategies for changing how faculty teach and interact with one another, how schools and postsecondary institutions are organized and administered, and how various services support students participating in vocational education.

A key element for moving these agendas forward is leadership development at all levels of the education enterprise. Often what needs to be done to improve vocational education is quite clear, but an understanding of how to do it or the leadership to implement the desired change is lacking. Leadership development, therefore, must be one of the primary objectives of the Professional Development Program.

D&T Program III: Special Populations

The National Center is dedicated to making education work for all students, especially those who are members of special populations. In order to ensure that secondary, postsecondary, and adult programs serving special populations are effective in delivering well-integrated and appropriately articulated vocational and academic offerings, this program focuses on

- comprehensive career guidance and counseling programs for special populations and
- increased awareness and understanding of gender equity in vocational special needs education.

D&T Program IV: Planning, Evaluation, and Accountability

The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 requires states to develop systems of performance measures and standards for secondary and postsecondary vocational education. Measures and standards are to figure
prominently in annual evaluations of vocational education programs. The emphasis of the Perkins Act on planning, evaluation, and accountability is not entirely new to federal policy in vocational education. However, what is new about the 1990 Perkins Act is a much stronger emphasis on student outcomes as the focus for evaluation and planning. Closely related to the accountability requirements of the Perkins Act are recent efforts to develop national business and education skill standards. The Planning, Evaluation, and Accountability Program assists state and national policy planning, provides technical assistance for developing and conducting program evaluations at the local and state level, and provides localities and states with ongoing information and technical assistance about performance measures and standards.

D&T Program V: Program Development, Curriculum, and Instructional Materials

Effective, work-based curriculum integration and Tech Prep programs use unconventional approaches to classroom organization, curriculum, and pedagogy. Consequently, these two initiatives require far-reaching changes in programs, curricula, and instructional materials.

Accomplishing these changes will not be easy. Barriers impede the implementation of new approaches to teaching: teachers may have insufficient knowledge about useful innovation; teachers may lack sufficient resources to obtain new curricula and proper training in their use; breaking familiar habits can be difficult; and finally, the increasing diversity of student populations can make it difficult to find effective curricula and other instructional materials. Overcoming such barriers requires a strategy for providing in-depth technical assistance on a continuous basis.

Technical assistance, however, is only as good as the programs and curricula it offers. Rigorous evaluation of instructional materials and wider dissemination of the results to practitioners are urgent needs.

This program emphasizes strategies that build institutional capacity, train trainers, empower instructors and administrators, keep practices current, and encourage technological development in business and industry.
D&T PROGRAM I: DISSEMINATION

Project Director: Peter Seidman, University of California at Berkeley (Year 1 of 5)

Keywords: Information Dissemination, Information Transfer, Communication (Thought Transfer), Referral, Publications, Networks, Agency Cooperation, Databases

The Dissemination Program will operate as a change agent by organizing itself as a "principle:" collaborative change system based upon the overriding premise that a person's change in behavior—not the transmission of tangible outcomes per se—is the primary goal of the system.

The four operating principles are as follows:

- building and maintaining continuous communications;
- building and maintaining social networks;
- building and maintaining a collaborative change planning and implementation strategy which accounts for transfer as a developmental process; and
- building and maintaining multiple, simultaneous strategies.

The Dissemination Program will operate as a centrally coordinated collaborative knowledge-sharing network among Center staff and research and nonresearch stakeholders in the vocational education enterprise. This network translates and brokers, for our constituencies, R&D-based knowledge, practitioner-based knowledge, and policy-based knowledge in ways useful to them and usable by them and facilitates the movement of that knowledge to these persons. In addition, it encourages the development of social networks among all stakeholders in a specific enterprise so knowledge is distributed and exchanged in useful, usable ways.

The Dissemination Program will organize itself around three basic functions: distribution, acquisition, and collaboration. Each of these components will use a varying blend of several approaches, including database development and use, information
brokering, publications, marketing/promotion, direct interpersonal linkages, and electronic communications.

**Distribution**

Distribution is the one-way flow of knowledge produced by the center. The Dissemination Program will engage in the following activities in order to effectively distribute knowledge to its user communities:

- product review, revision, production, and distribution;
- research synthesis; and
- product and Center promotion/marketing and public awareness.

The activities of the Center will generate a variety of research, development, and training materials as well as materials derived from these primary outcomes, all of which must be made available to educators, researchers, policymakers, business/industry/labor, and interested citizens. A product review, revision, production, and distribution process, resulting in the distribution of quality materials, will be maintained.

The NCRVE Materials Distribution Service produces, markets, and distributes all primary and most derived documents. MDS operates as a partially subsidized entity.

An electronic archive of selected Center publications will be maintained as a component of VocServe, the Dissemination Program's public-access bulletin board system. VocServe also will support electronic intersite communications among all the actors in the review-through-distribution process.

**Derived Materials**

Derived materials result from one of two processes: (1) a formal, rational, and systematic translation process which develops spin-offs from project outcomes (e.g., op/ed articles, Center-guest-editorship of a journal issue, topical briefs) or (2) an intentionally opportunistic process which captures materials that develop naturally from a
project's activities. Papers presented at conferences and proceedings from a Center-sponsored meeting are two examples.

The formal translation process includes, among the planned materials, a Reprint Series, a Technical Assistance Report Series, a newsletter, and topical knowledge syntheses. The first three items will be produced at the University of California at Berkeley, and the knowledge syntheses will be developed at the Teachers College site.

Promotion/Marketing and Public Awareness

A publications catalog in both hardcopy and electronic formats will be produced; publications will be advertised in various journals of education and vocational education; products will be promoted by direct mail (e.g., flyers and postcards); publications will be electronically marketed over VocServe as well as several independent electronic bulletin boards; and products will be marketed in the Center's newsletter. Additionally, MDS staff will maintain a display at professional conferences and meetings in order to make attendees aware of Center resources.

Acquisition

Acquisition involves assisting the D&T Center's clients to access information. In the process of so doing, the Center will build social networks between itself and its user communities as well as encourage such networks to be developed among users themselves.

The major technologies the Center will use to implement acquisition are

- information brokering,
- national vocational education databases, and
- electronic communications.
Information Brokering

The overall mission of information brokering will be to operate as an intermediary for a variety of information services, products, and human resources to educators, researchers, policymakers, and business/industry/labor.

To carry out brokering's mission of providing a variety of information services and products, the University of California at Berkeley Dissemination site will

- search Center-maintained databases;
- search ERIC;
- seek resources, data, and information over electronic networks (e.g., several Internet/BITNET LISTSERVs);
- participate in relevant partnerships with other information clearinghouses (e.g., the ERIC Clearinghouses and the National Youth Employment Coalition Information Center); and
- maintain referral networks among all five Dissemination and Training Program directors and staff, the R&D project staff, and the site directors.

The University of California at Berkeley will maintain an 800 number for brokering. The other major channel of brokering requests as well as response is through electronic communications. This brokering capacity will be achieved both through VocServe as well as through membership in major relevant electronic discussion groups.

Electronic Communications

Electronic communications will be used to receive information requests, to respond to these requests, and to seek information for clients in need of such information for decision making. The Dissemination Program will establish and maintain its own public bulletin board system (VocServe) as well as maintain limited membership in relevant electronic discussion groups and other systems that it does not manage (e.g., Internet/BITNET LISTSERVs and state-run practitioner networks).
Electronic communications will be used in a number of ways to deliver information. For example, Center events and products—conferences, R&D reports, and videotapes—will be marketed via electronic media; requests for information will be received and answered electronically; and more extensive data in electronic form (e.g., data sets and texts of publications) will be electronically archived and made accessible to all users of an electronic network.

National Vocational Education Databases

The NCRVE traditionally has been responsible for maintaining two national databases—Resources in Vocational Education (RIVE) and Vocational Education Curriculum Materials (VECM). RIVE will become a local system maintained and searched (upon request) by the Center. VECM will be managed for the National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE) for the NCRVE's first year of operation, after which the Center anticipates VECM will be reconfigured into a microcomputer database updated quarterly by the Dissemination Program.

Other National Databases

The Dissemination Program will contribute data to as well as use the resources of several ERIC Clearinghouses: those on Adult, Continuing, and Vocational Education; on Junior Colleges; on Rural Education and Small Schools; and on Urban Education. In addition, the National Youth Employment Coalition Information Database will be utilized as well as include Center-generated items.

Collaboration

Collaboration promotes the multi-directional flow of Center-produced knowledge. In the process of so doing, the Center will build social networks between itself and its user communities. In addition, the Center will encourage such networks to be developed among users themselves. The key implementing approaches the Center will use in encouraging this flow are

- research synthesis,
electronic communications, and

linkage with other key knowledge transfer networks.

Research Synthesis

Research synthesis is a process as well as a product. Use of computer-mediated communication and other consensus-building collaborative processes will result in research synthesis activities which engage all stakeholders.

Electronic Communications

The Center will promote and facilitate the exchange of information among itself and its user communities by electronic means. The Center will maintain limited participation in BITNET/Internet discussion lists and in existing practitioner networks in order to maintain contact with those user groups, sharing in user-driven discussions. The bulk of the Center's electronic knowledge distribution, acquisition, and collaboration efforts, however, will be channeled through the new VocServe system.

Linkages with Key Knowledge Transfer Networks

The Center will collaborate with key knowledge transfer networks in order to more effectively integrate knowledge producers, transfer agents, and users into a shared effort at developing and using knowledge generated through formal dissemination and training activities as well as practice.

The Dissemination Program will maintain and strengthen these networks with the following networks:

- the National Network for Curriculum Coordination in Vocational and Technical Education;
- the National Association for Vocational Education Program Improvement;
- the OERI Regional Laboratories;
- the ERIC Clearinghouses on Adult, Career, and Vocational Education; Junior Colleges; Rural and Small Schools; and Urban Education; and
the Education Writers Association.

In addition, the Dissemination Program will develop linkages with two other networks:

- the National Diffusion Network and
- the NEA National Center for Innovation.

**Deliverables**

In addition to the twenty primary materials and thirty working papers/reprints in 1993, the Dissemination Program anticipates shepherding through review, revision, production, and distribution

- three issues of its newsletter, *CenterWork*;
- six synthesis papers;
- *The 1993 Agenda*;
- *The Human Resource Directory*;
- the NCRVE information brochure;
- the *Products Catalog*;
- at least four "mini-products-catalogs," highlighting the Center-produced materials in the integration of vocational and academic education, performance standards/assessment, special populations, and Tech Prep; and
- at least one informational advertorial in *Education Week*. 
D&T PROGRAM II: 
PROFESSIONAL DEVELOPMENT

Project Director: Curtis Finch, Virginia Polytechnic Institute and State University 
(Year 1 of 5)

Keywords: Inservice Education, Professional Development, Delivery Systems, Performance Factors, Teacher Effectiveness, Leadership Training, Minority Group Teachers, Gender Equity

Program Themes and Objectives

The themes that will direct Professional Development Program activities over the next five years are as follows:

- Teaching and Learning: preparing vocational and academic faculty to function effectively in professional teams as they help students learn.

- Leadership and Leading: preparing faculty, administrators, and student services personnel to function effectively as formal and informal leaders in ever-changing educational environments and to assist in transforming vocational education from what it is to what it can be.

- Visioning and Transforming: providing vocational education professionals with the vision and capability to transform their organizations from what they are to what they must become in the future.

Building on these themes, the Professional Development Program has the following four objectives:

1. Establish a National Professional Development Academy for Vocational Education serving the needs of faculty, administrators, and student services personnel.

2. Maintain a relevant agenda for professional development activity that is drawn from and based on the evolving needs of practicing vocational and academic education professionals.
3. Provide activities and programs that will assist minorities and women to prepare for leadership roles in vocational education.

4. Use appropriate advanced technology in conjunction with professional development activities to maximize the transfer of knowledge to practicing vocational education professionals.

Program Components

Professional development objectives will be met through the combined efforts of Center staff members working in the program's four basic components. Three of these components—Needs Assessment, Planning, and Delivery—each contribute to the operation of the most visible program component—a National Professional Development Academy.

National Professional Development Academy

A National Professional Development Academy will be established to serve as an umbrella for all professional development activities conducted by the Center. Specifically, the National Academy will offer on a regular basis regional and national activities related to teaching, leadership, and quality that include seminars, workshops, satellite teleconferences, and programs in conjunction with state, regional, and national conferences and conventions. These activities will range from brief conferences and half-day workshops to long-term professional development programs.

Needs Assessment Component

Activities in the Needs Assessment component will be concerned with identifying the current and future needs of practicing vocational education professionals.

Planning Component

The program's Planning component involves translation of identified needs into action plans.
Delivery Component

The Delivery component emphasizes tasks associated with providing professional development to various audiences.

Activities

Activity I: Video Teleconferences

The two teleconferences to be offered in 1993 through the National Academy will respond to the professional development needs of vocational teachers, administrators, and student services personnel.

Activity 2: Professional Development Institutes, Workshops, and American Vocational Association (AVA) Pre-Sessions

This professional development activity will include the following: (1) AVA Convention pre-sessions; (2) co-sponsorship of conferences in collaboration with state, regional, and national organizations; and (3) professional development institutes and workshops in response to requests from the field (e.g., state vocational education directors).

AVA Convention Pre-Sessions

AVA pre-sessions to be offered through the National Professional Development Academy will showcase exemplary programs and practices identified by Center staff and practitioners. Among the topics under consideration are Tech Prep, integration of vocational and academic education, leadership development, and assessment practices.

Collaboration with State, Regional, and National Conferences

Collaboration with state, regional, and other national organizations offering professional development activities will increase opportunities for reaching target audiences and for effective promotion and publicity. The Center will continue to co-sponsor conferences, workshops, and seminars and will seek opportunities for presenting new information in meetings sponsored by our colleagues. This new information will be derived from research and exemplary programs and will relate to the themes of the state, regional, and national conferences held by members of our network. The focus will be on
professional development and will draw upon the themes of our Professional Development Program.

**Institutes and Workshops**

Center staff will additionally offer four to six institutes and/or workshops per year that focus on topics relevant to educators' needs.

Among the topics that can be addressed in these institutes and workshops are leadership development, teacher induction, communication for the workplace, recruitment of minority and female teachers and administrators, team-building for teachers and administrators, site-based management, establishment of Tech Prep programs, integration of vocational and academic education, and strategies for assisting at-risk youth.

One theme to be incorporated into the workshops and institutes will be "The Empowerment of Teachers" with the goal of assisting teachers in moving toward leadership roles that allow them to make decisions about the redesign of their work.

**Activity 3: Professional-in-Residence Program**

This program is designed to provide vocational education professionals with opportunities for personal growth through more active involvement with the Center's dissemination and training activities. During 1993, the availability of professional-in-residence opportunities will be announced, and applications will be solicited. Additionally, selection criteria will be determined, and persons will be selected for the 1994-1995 period.

**Activity 4: Leadership Development for Minorities and Women**

A multi-year activity is proposed that will increase the number of women and minorities who are prepared for, willing to accept responsibility for, and can successfully perform leadership roles in vocational education. The first year, 1993, will be devoted to (1) creating a leadership development program particularly suited for women and minorities. (2) carrying out formative evaluations of the program, and (3) training personnel from throughout the country to conduct the program.
The years 1994 and 1995 will be spent (1) conducting additional professional development institutes (train-the-trainer workshops) as needed to further disseminate the leadership development program and train people to use it (probably for one per year); (2) stimulating and facilitating the conduct of the program nationwide (by the personnel prepared in the leadership institutes); (3) creating a network of leadership trainers to regularize the continuing exchange of ideas for program improvement; and (4) conducting summative program evaluations.
D&T PROGRAM III: SPECIAL POPULATIONS

Project Director: Carolyn Maddy-Bernstein, University of Illinois (Year 1 of 5)

Keywords: Special Populations, Guidance and Counseling, Gender Equity, Information Dissemination, Databases, Agency Cooperation

In order to ensure that secondary, postsecondary, and adult programs serving special populations are effective in delivering well-integrated and appropriately articulated vocational and academic offerings, TASPP activities and objectives for 1993 will focus on the following:

- comprehensive career guidance and counseling programs and
- increasing awareness and understanding of gender equity in vocational special needs education.

Activities

TASPP has organized activities to correspond to each of its five objectives.

TASPP will conduct the following activities during 1993:

1. Increase awareness and understanding of critical issues in vocational special needs education.

   1.1 Four topical research/resource papers (TASPP BRIEFs) will be produced.

   1.2 A program improvement handbook will be developed for personnel of state and local education agencies.

   1.3 TASPP staff will submit proposals to present at state, regional, and national conferences (e.g., the Council for Exceptional Children and AVA). TASPP will also co-sponsor conferences with the Transition Research Institute, the Mississippi River Valley Special Needs professionals, and the National Association of Special Needs State Administrators.
1.4 Information will be *disseminated* concerning upcoming presentations by TASPP staff, and the availability of TASPP BRIEFs and the program improvement handbook will be disseminated (1) through announcements submitted to newsletters, (2) through announcements posted on relevant electronic bulletin boards, and (3) during TASPP staff presentations at regional and national conferences.

2. Increase the use of available resources.

2.1 TASPP will prepare four to six annotated *resource lists* (e.g., performance measures and standards).

2.2 A *resource service* will handle information requests related to vocational education for special populations.

2.3 On an ongoing basis, TASPP staff will engage in a *resource search* of relevant electronic bulletin boards and newsletters.

2.4 TASPP staff will enter annotations of selected resources into its computerized information base.

2.5 Information will be *disseminated* on the availability of annotated resource lists on topics related to program improvement. Such dissemination will be through announcements (1) submitted to newsletters, (2) posted on relevant electronic bulletin boards, and (3) during TASPP staff presentations at regional and national conferences.

3. Initiate and support networks of professionals.

3.1 TASPP will continue to serve as a hub for a *network of state personnel* responsible for special populations programs.

3.2 TASPP will continue to serve as the hub of a network of the *National Association for Special Needs State-Administrators* through maintaining continual contact with the group members, disseminating nine networking letters, and co-sponsoring their annual conference.
4. Promote exemplary programs and the adoption of model practices.

4.1 TASPP will conduct an *exemplary program search* (known as the National Recognition Program). Awardees for 1993 will be announced in the fall.

4.2 A *national topical conference* for teachers, counselors, administrators, and other professionals will be conducted, featuring presentations of exemplary program winners and other relevant topics.

4.3 *Dissemination* of exemplary program information will occur through announcements (1) submitted to newsletters, (2) posted on relevant electronic bulletin boards, and (3) made during TASPP staff presentations at regional and national conferences, and (4) used to notify conference organizers of exemplary programs located in the vicinity of the conference (to encourage site visits). Program descriptions and contact information will also be available on a request basis through TASPP's resource service.

5. Maximize the impact of TASPP resources and activities through collaborative activities with state and national organizations.

5.1 TASPP will conduct a half-day program either preceding or during the annual Transition Research Institute workshops on program evaluation.

5.2 TASPP will assist the vocational special needs professionals of the five-state Mississippi Valley Special Needs consortium (Alabama, Louisiana, Mississippi, Missouri, and Tennessee) to plan, conduct, and evaluate their annual conference.

5.3 TASPP staff, working with the American Counseling Association (ACA) and U.S. Department of Education staff, will identify exemplary program components through a literature review and a survey of career counselors and professionals.
Program Objectives

The Planning, Evaluation, and Accountability Program has the following three objectives:

1. Assist state and national policy planning.

2. Provide technical assistance for developing and conducting program evaluations at the local and state level.

3. Provide localities and states with ongoing information and technical assistance about performance measures and standards.

Program Components and Activities

Databases

The Planning, Evaluation, and Accountability Program will maintain, update, and supplement an extensive database library of data from national surveys relevant to vocational education policy and practice (e.g., National Longitudinal Study of the Senior Class of 1972, High School Transcript Study of 1987, and the Integrated Postsecondary Education Data System).

Additionally, in December 1992, the current NCRVE submitted its final report to the U.S. Department of Education’s Office of Vocational and Adult Education as well as its National Center for Educational Statistics on national data systems for vocational education. During 1993, we will follow up on these recommendations with the U.S.
Department of Education and will continue to advise the USDE on national data for vocational education.

**Clearinghouse**

This program will develop and maintain a clearinghouse on accountability that monitors what states are doing with performance measures and standards, and we will share this information with LEAs and states. In addition, the clearinghouse will include information on related topics such as assessment, ways in which states are operationalizing "all aspects of the industry," and experience with using various data sources such as transcripts or unemployment insurance data.

Further, the clearinghouse will maintain a mailing list of secondary and postsecondary contacts in each state and will periodically update local and state personnel on new information. Staff will also be provided to answer inquiries by phone or electronic mail.

**Annual Teleconference and Other Presentations**

The theme of the program's teleconference in 1993 will be *New Developments in Authentic Assessment: Performance Testing, Portfolios, and Other Alternatives to Paper and Pencil Tests*. The teleconference will be aimed primarily at local secondary and postsecondary faculty and administrators, although state personnel will also find the sessions useful. A Center affiliate, the Far West Laboratory for Educational Research and Development, will assist in designing and conducting the teleconference.

In addition to this teleconference, this program will sponsor other presentations as appropriate. The program will sponsor a pre-session at the 1993 Annual AVA Conference. The theme of the pre-session will be *The First Year of Accountability Systems in Vocational Education: What Have We Learned?* The primary audience for the pre-session will be local and state administrators. Presentations will be made to other associations and organizations such as the National Association of State Directors of Vocational Education and the National Education Association.
Summer Workshop

The Summer Workshop for 1993 will focus on assessing states' experiences with the first year of implementing performance measures and standards. This three-day workshop for state-level administrators at both the secondary and postsecondary levels is intended primarily as a means for states to communicate with one another. The proceedings of the workshop will be summarized and distributed to all states through the program's Accountability Clearinghouse.

Field-Initiated Evaluations

The program will support requests from the field for program evaluations at the local and state level. At least two field-initiated evaluations are planned for 1993. The first will continue NCRVE's technical assistance to the Vocational Education Consortium of the Southern Regional Education Board (SREB). NCRVE will assist SREB with these new sites in local program evaluation and with implementing procedures for baseline data collection.

NCRVE will assist the state of Louisiana with an evaluation of its applied academics curriculum. In 1993, NCRVE will proceed with the collection and analysis of the data for Louisiana and will prepare a first-year report.
D&T PROGRAM V:
PROGRAM DEVELOPMENT, CURRICULUM, AND INSTRUCTIONAL MATERIALS

Project Director: L. Allen Phelps, University of Wisconsin, Madison (Year 1 of 5)

Keywords: Program Improvement, Curriculum Development, Curriculum Evaluation, Instructional Materials, Agency Cooperation, Tech Prep, Integration of Vocational and Academic Education

Program Objectives

The primary goals and objectives of the program are the following:

• To build/enhance the capacities of schools, postsecondary institutions, and state boards of vocational education to undertake continuous program and curriculum improvement.

• To enhance the quality, utility, and effectiveness of vocational education curriculum and instructional products.

• To strengthen the connections between developers, dissemination personnel, and end users.

• To empower vocational educators in the refinement, implementation, and evaluation of curriculum and instructional products.

• To assure that curriculum and instructional products in vocational education respect and nurture diversity among students.

• To promote the transfer of technology from advanced technology centers, business incubators, community colleges, and others to business and industry, especially minority enterprises.
Program Components

This program will consist of two components: (1) the National Consortium on Product Quality for Vocational Education and (2) the National Network on Curriculum Integration and Tech Prep.

National Consortium on Product Quality for Vocational Education

The National Consortium on Product Quality for Vocational Education will be comprised of members of several existing organizations and groups directly involved in curriculum development and instructional improvement. These include, for example, the six NNCCVTE Curriculum Coordination Centers, AVA, selected national trade associations, the National Association for Vocational Education Program Improvement, and the National Association of State Directors for Vocational-Technical Education. The Consortium will include groups involved in the production of materials (e.g., textbook publishers) as ex officio members with no voting rights.

The Consortium will conduct two types of activities:

1. Establish standards for exemplary products.
2. Identify, certify, and disseminate exemplary products.

During 1993, the National Consortium on Product Quality will concentrate on developing standards for identifying exemplary products and establishing procedures for product evaluation and quality certification.

In the fall of 1993, the Center will publish and disseminate a Guidebook detailing the mission, objectives, standards, and procedures for product quality review and dissemination. In addition, program staff and members of the National Consortium Board will conduct workshops and other sessions during the annual meeting of the AVA in December 1993. Presentations at other workshops and conferences will be planned jointly with the Curriculum Coordination Centers and the National Association of State Directors for Vocational-Technical Education for late 1993 and early 1994.
Once products have been reviewed, staff will prepare appropriate descriptive and evaluative profiles. These profiles will detail the critical attributes of the products and offer suggestions for their best use.

National Network on Curriculum Integration and Tech Prep

The National Network on Curriculum Integration and Tech Prep will provide technical assistance to secondary and postsecondary institutions.

The Network will conduct five major types of activities:

1. Develop, maintain, and expand a Resource Roster of individuals able to provide expertise in integration and Tech Prep.
2. Provide general outreach services.
3. Design targeted outreach services to be implemented beginning in 1994.
4. Hold three regional summer institutes on integration and Tech Prep.
5. Identify model programs.
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