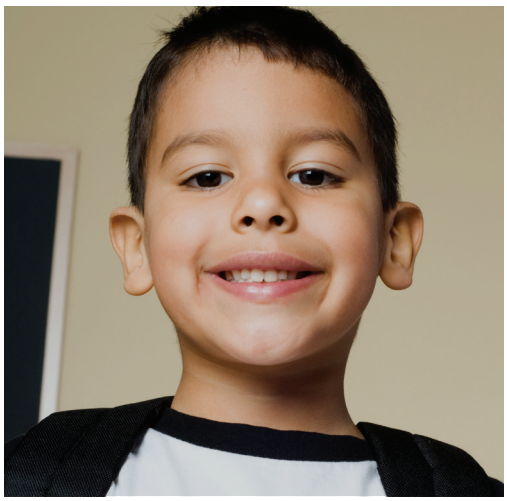
FOUNDATION FOR CHILD DEVELOPMENT

GETTING IT RIGHT: THE CONVERSATION GUIDE FOR PREPARING THE NEXT GENERATION OF ECE PRACTITIONERS

GETTING STARTED









PURPOSE AND RATIONALE

In June of 2020, the Foundation for Child Development released *Getting it Right: Using Implementation Research to Improve Outcomes in Early Care and Education*. The publication provides insights into the value of including implementation research in the study of early care and education (ECE) and its potential to improve programs and policies and achieve stronger outcomes for all young children. As more programs are brought to scale, our ability to achieve greater impacts for all young children rests on a more nuanced understanding of the context in which ECE programs and policies are being implemented locally and the different impacts on specific subgroups of children. As a result, now is the moment for ECE practitioners, researchers, and policymakers to collaborate and identify the critical components of effective ECE programs and policies and engage in meaningful exploration of what works, for whom, and under what conditions.

This conversation guide was created to help faculty in institutions of higher education use *Getting it Right* as a resource in the preparation of future ECE practitioners—early educators working directly with children; early education leaders administering programs; and those who support them (e.g., coaches) working in school, center-based, and home-based settings. The overall goal is to highlight that ECE practice and research are connected in multiple ways.

First, practitioners may seek to understand the foundational knowledge of the ECE field—what we already know from research about ECE and child development. This pursuit always leads to the identification of gaps in our current research base and can prompt thinking about what additional research is needed to answer questions about what we still need to know.

Second, one of the overarching aims of implementation research is to help practitioners apply, hone, and refine their knowledge and skills in practice. As such, practitioners may have an interest in understanding how to utilize research to shape their practice and may seek to learn how to identify what is strong, reliable, and valid research that they can use to guide their individual practice.

Third, as a part of continuous professional learning, many practitioners utilize the self-assessment process of reflective teaching to examine how their own beliefs and knowledge align, or not, with their instructional practice. This method of self-inquiry follows a research model as it involves forming a question, collecting data, interpreting data, and using findings to shape future practice.

Finally, as implementation research is occurring across all ECE settings, practitioners, and perhaps the children they are educating, will likely be participants in this work. As a result, practitioners may have opportunities to build collaborative relationships with researchers as partners in designing and conducting the implementation research.

This guide supports higher education faculty to initiate and sustain conversations with students about effective ECE practices and policies, what still needs to be learned, and how to deepen our understanding of young children's development and learning. By understanding and participating in implementation research, practitioners can help shape research agendas in ways that help fill in the existing gaps in our knowledge, especially knowledge relevant to instructional practice. Developed for faculty who are preparing practitioners, this guide focuses on teaching students who are enrolled in a variety of early educator and administrator degree programs. It can be used when working with senior-level undergraduate students or master's and doctoral graduate students at any point in their degree programs.

As you and your students consider research questions, study designs, the interpretation and implication of findings, and the application of research to practice, you will be joining the authors of the original volume in the challenge of gaining a deeper understanding of the context in which research is conducted. To enhance your conversations, we interviewed each author and have included quotes that capture their insights about themselves, their work, and the role of implementation research in the field. As these quotes reveal, the authors respect your students as future collaborators in moving the field forward.

Many of the authors offer insights not only about implementation research design and approach, but also about the stance of those conducting implementation research based on their experiences. Stance refers to the attitudes, values, and beliefs each team member brings to their work, as well as the skills and mindset required to be a continuous learner and/or collaborator in research. It is important to recognize that stance can also be influenced by unconscious bias. With this guide, you can invite each of your students to be intentional in exploring and establishing their research stance and perspective. Such reflections will help ensure that long after your class, students will be aware of how who they are and what they bring to ECE research will have an impact on their work.

USING THIS GUIDE AND HOW IT IS ORGANIZED

This guide is organized for ease of navigation as you plan and teach your classes. It is divided into three sections that are intended to provide an overview of an implementation research approach; offer questions to support you in sparking and sustaining conversations with your students, both those studying research evaluation and methods and those whose focus is on ECE program quality and child development; and present reflections on moving ECE implementation research forward.

Each chapter includes:

- A summary excerpted from the *Getting it Right Chapter Summaries*
- Themes excerpted from the *Getting it Right* full publication
- Quotes from the author(s)
- Questions for further discussion
- A "Moving forward" paragraph to facilitate further insights and takeaways

The chapters open with a summary paragraph, which appears within the *Getting it Right: Using Implementation Research to Improve Outcomes in Early Care and Education Chapter Summaries* resource. The excerpts you will see throughout the chapters are from the full publication, *Getting it Right: Using Implementation Research to Improve Outcomes in Early Care and Education*. They are indicated by the corresponding page number. Discussion questions follow each excerpted theme, and chapters close with the "Moving forward" insights.

Discussions may lead to new questions or reflective exercises and activities that can deepen students' understanding of implementation research and their role as researchers and practitioners. You may decide to share this guide with your students as a resource to help them reflect upon their understanding both during and after taking your class. By doing so, you help ensure the conversation continues as students have access to both content and reflections of each author about the rich possibilities of this research approach.

Resources are also provided to help further engage your students with the publication content. In the full publication, Chapter 7 is a case study that highlights the experience of Boston Public Schools in building and refining its Preschool-2nd grade program. In this guide, Chapter 7 was used to generate a series of activities that you may choose to use with your students individually or in small groups. However, any chapter and its accompanying discussion questions can be used in this way to create group activities or other follow-up assignments.

A complementary *Getting it Right 2020 Summer Webinar Series* is also available. You may use it to support

your students in understanding the importance of implementation research, its role in the effectiveness of ECE interventions, and related themes from the companion publication. Students may enjoy seeing the publication authors reflect on their work and hearing the discussions. Please access these highlights and key takeaways on-demand as you explore this guide.

Getting it Right: Using Implementation Research to Improve Outcomes in Early Care and Education Virtual Launch

In this webinar, key authors shared an exclusive overview about the publication, chapter highlights, insights about the value of implementation research in early care and education, and the potential of ECE to improve programs and policies for stronger outcomes for all young children.

Featured Presenters:
Margaret R. Burchinal, Ph.D., University of North Carolina at Chapel Hill
Jeanne Brooks-Gunn, Ph.D., Columbia University
Tamara G. Halle, Ph.D., Child Trends
JoAnn Hsueh, Ph.D., MDRC
Iheoma U. Iruka, Ph.D., HighScope Educational Research Foundation
Jacqueline Jones, Ph.D., Foundation for Child Development
Discussant: Jason Sachs, Ed.D., Boston Public Schools

Getting it Right: Part 1: What More Do We Need to Know About High-quality ECE Programs

In this webinar, presenters highlighted key takeaways from the publication as it attempts to answer several questions for the field: What instructional content and strategies are tied to positive child outcomes? What more do we need to know about supporting dual language learners and bilingual education? What elements of coaching lead to changing teacher practice? How can we build effective and sustainable systems of ongoing professional development? How can quality programs be brought to scale? How can we ensure that programs are scaled in a way that promotes the development of children from diverse racial/ethnic, socioeconomic, cultural, and linguistic backgrounds?

Featured Presenters:
Linda Espinosa, Ph.D., University of Missouri-Columbia
Dale Farran, Ph.D., Vanderbilt University
Jacqueline Jones, Ph.D., Foundation for Child Development
Robert Pianta, Ph.D., University of Virginia
Jason Sachs, Ed.D., Boston Public Schools
Discussant: Ellen Frede, Ph.D., National Institute for Early Education Research

Getting it Right: Part 2: Implementation Research in Early Care and Education

In this webinar, presenters highlighted key takeaways from the publication as it attempts to answer several questions for the ECE field: What can we learn from implementation research principles to lead ECE programs, practices, and policies toward better outcomes for young children? How can various implementation research designs address questions relevant to the field? How is improvement science different from implementation science? How are qualitative studies helping us understand variation across sites and localities implementing evidence-based programs? How can equity-focused implementation research be an effective tool for reducing bias in evaluations?

Featured Presenters:
Tamara Halle, Ph.D., Child Trends
JoAnn Hsueh, Ph.D., MDRC
Milagros Nores, Ph.D., National Institute for Early Education Research
Sharon Ryan, Ed.D., Rutgers University
Sara Vecchiotti, Ph.D., Esq., Foundation for Child Development
Discussant: Caroline Ebanks, Ph.D., Institute of Education Sciences

Getting it Right: Part 3: Moving Towards Equity Through Implementation Research

In this webinar, presenters shared insights about how equity-focused ECE research attempts to address the needs of children from diverse racial/ethnic, socioeconomic, cultural, and linguistic backgrounds. The following questions were addressed: What strategies do an equity-focused implementation research study employ across various stages of research? How can a Social Determinants of Early Learning framework be used to guide researchers in addressing systemic inequities? How can ECE programs foster early bilingualism while improving outcomes for children? What can we learn from the Boston Public Schools' experience in moving towards achieving equitable outcomes?

Featured Presenters:
Linda Espinosa, Ph.D., University of Missouri-Columbia
Iheoma U. Iruka, Ph.D., HighScope Educational Research Foundation
Jacqueline Jones, Ph.D., Foundation for Child Development
Milagros Nores, Ph.D., National Institute for Early Education Research
Jason Sachs, Ed.D., Boston Public Schools
Discussant: Kristine Andrews, Ph.D., Child Trends

While all these resources are provided to support student learning, you know your students. You know their interests, strengths, and the areas they need to further develop. This guide is written for you. Make it yours.

WHAT IS IMPLEMENTATION RESEARCH?

Getting it Right: Using Implementation Research to Improve Outcomes in Early Care and Education does not prescribe a single definition of implementation research. Instead, it draws attention to the rich potential of investigating ECE programs in context and highlights the importance of practitioner-researcher collaboration in doing so. It also outlines how implementation research can advance the ECE field by answering questions that practitioners and policymakers prioritize as they seek to continuously improve and strengthen the ECE policies and programs that they govern, manage, and implement to ensure positive outcomes for all young children.

In creating its publication, the Foundation for Child Development brought together a group of respected, thoughtful researchers to share their perspectives, questions, and experiences with a rigorous scientific approach that presents both opportunities and challenges. Many of these researchers have conducted groundbreaking research that now serves as the foundation of our knowledge of what it takes to offer high-quality experiences to young children. As global attention has focused on issues of racial and social justice, we see from this foundational research that issues of equity and access to food, health care, housing, and high-quality early experiences have been a part of the early childhood landscape for a very long time. This is of no surprise to practitioners who work so hard to understand and build relationships with children, families, and their communities. Implementation research provides an opportunity to build on our research foundations; explore root causes; examine research priorities and methodology; and build stronger connections across research, policy, and practice.

As *Getting it Right* demonstrates, conducting sound, rigorous, high-quality ECE implementation research to build evidence for the field is no easy task. Realistically, researchers doing such work need to be willing to "embrace the messy," from initial design through final analysis, interpretation, and dissemination. The messiness reflects the intricacies of the interventions and is precisely what makes the work so interesting (Vecchiotti, Conclusion). Such an approach necessitates a particular type of applied researcher, one who will embrace a shift from the traditional research approach. Practitioners may encounter implementation researchers who are conducting studies with this applied researcher stance and are seeking practitioners' collaboration as research partners. This stance is demonstrated by researchers who:

- Have a deep appreciation for ever-evolving contexts, typically encompassing multiple layers of policy and programmatic decisions and surrounding conditions.
- Have extensive knowledge about various rigorous designs and methods of analysis to answer nuanced and interrelated questions nested within and across these implementation contexts.
- Consider building a collaborative process with practitioners and policymakers that encompasses the entire research process, including the co-construction of research questions, and continues throughout research design, data access, collection, and reporting. This is an important shift for many applied researchers, and the benefits of this two-way relationship are many. Furthermore, interpreting the data and determining the implications can help guide collaborative thinking about how to account for particular implementation contexts and provide more insights into research-to-practice connections.
- Consider developing their own knowledge about their research partner's work, especially because they are examining the tensions between the planned ideal and actual implementation. To make meaningful and useful policy recommendations, researchers need to acquire operational knowledge, such as understanding a program's or policy's specific purpose, elements, and process. To make practice recommendations meaningful and useful, researchers need to understand what practitioners do, why they do it, and how practice can be enhanced to support children's learning and development.
- Provide a common ground of shared operational knowledge to help build and maintain trust among collaborators throughout all stages of research. It can also help to manage appropriate expectations regarding how research can realistically be used to influence or support continuous quality improvement efforts.

With such knowledge, skills, and dispositions, applied implementation researchers, in collaboration with practitioners and policymakers, can increase the potential of research to shape, improve, or transform ECE policy and programs in ways that allow these programs to better serve all children and their families.

FILLING IN THE GAPS OF OUR KNOWLEDGE TO IMPROVE OUTCOMES FOR ALL CHILDREN

Until now, the ECE field has largely depended upon the strategy of randomized control trials (RCTs) to understand and assess program effectiveness. These trials randomly assign some children to a group that receives a defined treatment and others to a group that does not. Assuming that all things are equal, post-treatment differences between the two groups can be attributed to the treatment's impact. Yet these trials may not capture nuances of variation or answer critical questions, including: Are all children experiencing the program under the same conditions? Are specific subgroups of children demonstrating different responses to the intervention?

Additional robust quantitative and qualitative data are also needed to ensure stronger outcomes for all children and significantly narrow the opportunity and achievement gaps for minoritized children and those living in poverty. A deeper understanding is needed about how equity issues, especially racism and poverty, discrimination related to race/ethnicity, socioeconomic status, cultural and linguistic background, gender, ability, and immigration status influence implementation of early childhood programs and outcomes for children. It may be that these issues, along with other variables such as quality of care, quality of programming, and quality of leadership, are central to understanding the relationship between populations most in need of services and components or constellations of program components. Understanding this is at the foundation of informed decisions about how to design and implement programs on behalf of all children.

Implementation research is not a replacement for RCTs, but it can augment RCTs. In fact, implementation research designs often use both quantitative and qualitative data sources to fully describe the unfolding stages of implementation and changing contexts (Halle, Ch. 10; Hsueh & Maier, Ch. 9; Ryan, Ch. 11). To fully capture how ECE programs and policies influence young children's development, the field must pay attention to both outcome- and implementation-oriented research.

HOW IMPLEMENTATION RESEARCH CAN SERVE THE ECE FIELD

Five key contributions that implementation research can make to the ECE field include:

Implementation research augments RCTs as it goes beyond answering the question of whether effects are demonstrated to explaining why or why not. By doing so, implementation research illuminates what makes ECE programs, practices, and policies effective and why. In this way, it can help support policies and practices around program replication, expansion, and sustainability, and guide program improvement to ensure that ECE programs reach their potential for narrowing achievement gaps.

Implementation research can push ECE research forward by identifying deeper questions about the multifaceted root causes of inequity and ways to eliminate disparities. It does this by bringing those who work with and for children and families each day together with those with the skills needed to conduct research. By understanding what's working, what isn't, for whom, and why, with the aim of advancing equity across children and families, research can strongly support the development of effective programs and policies for all children. To be effective, research with an equity lens integrates equity concepts across all research components, from questions asked to interpretation and dissemination of findings to being sure that the research itself does not introduce biases. Effective implementation research with an equity lens depends in large part on the experiences, values, and mindsets of researchers and collaborators as individuals. The field urgently needs implementation research to guide localities on the specific challenges and opportunities they may encounter as ECE programs are implemented in diverse real-world settings (Weiland, 2018[1]).

Implementation research encourages refining the measurement of ECE quality to help achieve higher program quality and better outcomes for children. Typically, the field focuses on global measures of ECE quality despite modest associations with child outcomes (Burchinal & Farran, Ch. 1). This includes process quality (the interactions between educators and children) and structural quality (indicators include caregivers' education and training, wages and benefits, the ratio of children to caregivers, the number of children in a setting, program leadership and administration, and parental involvement[2]). Focusing instead on measures and program models that concentrate on specific instructional content and strategies to promote children's school readiness skills related to language, executive functioning, and self-regulation would be a step forward. To this end, tools will be needed to take a "fine-grain look" at what happens between teachers and specific subgroups of children and what works for children. Practitioner insights and input will be vital.

Implementation research potentially can provide timely answers to policymakers' questions as it enhances and extends findings that are useful and meaningful for continuous quality improvement of systems and practices (Halle, Ch. 10). Implementation research is rigorous and complex, while also taking a practical approach. It examines program implementation in real time, supporting policymakers and the field to consider contexts and other variables that influence quality and outcomes for subgroups of children. An intriguing tool, implementation research holds the potential for providing needed information if the early childhood community and policymakers are going to make the best decisions for all children.

Implementation research provides data needed to address implementation scale-up questions, particularly how and when ECE is effective and for whom. ECE programs and policies are increasingly being brought to scale, particularly in states and municipalities (Friedman-Krauss et al., 2019[3]). Yet as research shows, many evidence-based ECE models have proven to be insufficient to guide program scaling that successfully benefits all children. Implementation research is a systematic inquiry into how a program is received and experienced in real-world settings and situations. In the long term, if we cannot answer implementation scale-up questions related to how and when ECE is effective, we risk losing support for increased investment in ECE (Jones & Vecchiotti, 2020), because expectations for ECE to attain certain child outcomes might outstrip results (Brooks-Gunn & Lazzeroni, Ch. 2). Implementation research can help minimize this risk.

IMPLEMENTATION RESEARCH AND YOUR STUDENTS: MAKING THE LINK

Your students may already be conducting their own research or using research in their practice. Either way, all of them have an opportunity to contribute to deepening the understanding of implementation research as they raise questions and share insights and experiences—both to potential research partners and during your course discussions.

Perhaps the most important point to take away is that research is a tool that can be used to answer real-world questions. Practitioners have the opportunity to shape research by bringing key questions to the table and to use the findings from research to inform their practice. By using this guide, practitioners can discover that ECE research is not set in stone and many important questions still need to be answered. Your students are invited to join the conversation, and they should be assured that their questions and contributions are not only welcome, but needed, to ensure that ECE research contributes in meaningful ways to the daily practice of practitioners and ultimately to the lives of young children and families.

The ECE field is filled with research possibilities. In the words of Pianta (Ch. 5): "Implementation science can provide the young researcher with an intellectual home." (Interview, 11/9/2020) Questions continue to emerge, suggesting an urgent need to expand applied research to gain a more nuanced understanding of how programs and policies are implemented and influence subgroups of children. Answering these questions will require a genuine collaboration between researchers and practitioners in all roles, and often families and community members as well.

In sum, the goal of this guide is to help you integrate implementation research into your curriculum and initiate conversations with your students. This guide can help steer those discussions and encourage all students to integrate implementation research into their own work and practice.

Acknowledgments.

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[3] Friedman-Krauss, A. H., Barnett, W. S., Garver, K., Hodges, K., Weisenfeld, G. G., & DiCrecchio, N. (2019). *The state of preschool 2018: State preschool yearbook*. National Institute for Early Education Research. http://nieer.org/state-preschool-yearbooks/2018-2

SECTION 1

WHAT DOES RESEARCH TELL US ABOUT EFFECTIVENESS AND IMPLEMENTATION OF ECE PROGRAMS ACROSS THE BIRTH-TO-EIGHT CONTINUUM?

IN SECTION 1:

Chapter 1: What Does Research Tell Us About ECE Programs?
By Margaret R. Burchinal, Ph.D., University of North Carolina at Chapel Hill and Dale C. Farran, Ph.D., Vanderbilt University

Chapter 2: What Are Reasonable Expectations for ECE Program Effectiveness?
By Jeanne Brooks-Gunn, Ph.D., Teachers College and College of Physicians and Surgeons, Columbia University and Sarah Lazzeroni, Teachers College, Columbia University

Chapter 3: Using a Social Determinants of Early Learning Framework to Eliminate Educational Disparities and Opportunity Gaps.
By Iheoma U. Iruka, Ph.D., HighScope Educational Research Foundation

SECTION 1, CHAPTER 1

WHAT DOES RESEARCH TELL US ABOUT ECE PROGRAMS?

Margaret R. Burchinal, Ph.D., University of Virginia (formerly University of North Carolina at Chapel Hill)
Dale C. Farran, Ph.D., Vanderbilt University

In *What Does Research Tell Us About ECE Programs?*, Margaret Burchinal and Dale C. Farran summarize the extensive research relating early care and education (ECE) quality to children's short- and long-term development. In discussing the factors that limit current ECE programs and policies from promoting better outcomes, they find that the field often focuses on current measures of global ECE quality despite very modest associations with child outcomes. Their interpretation of the research suggests that ECE program models can have substantial impacts, and that the field should broaden its focus beyond widely used quality measures to focus on ECE practices with larger impacts on important school readiness skills such as language, executive functioning, and self-regulation. Such a program approach is likely to be more successful in supporting the long-term development of all children.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

> **We see these very modest relationships between indicators of quality and outcomes, yet we haven't wanted to question underlying assumptions of the ECE field about how they are connected. We need to take an evaluation point of view and ask: What is the goal and how is meeting this goal being implemented? What did you do to meet that goal? Are you doing what you think you are doing? What is the outcome on children?** (Burchinal interview, 10/9/2020)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. Structural Quality ➡ Process Quality ➡ Children's Outcomes. Most ECE research is based on a theoretical model that posits that structural quality (e.g., characteristics such as teacher education and ratio of children to adults) lays the foundation for process quality (i.e., the frequency and quality of interactions between caregivers and children), and that it is process quality that impacts child outcomes. But the evidence supporting this model using current measures of structural and process quality is quite limited. Thus, we do not know enough about what works (or not), for whom, and under what conditions in promoting which skills for young children (p. 16).

Current ECE quality models assume that children acquire cognitive, academic, and social skills when they experience high levels of process quality, but the models do not specify how quality experiences promote specific skills. The fact that we see much larger impacts on outcomes in studies of specific curricula (Duncan & Magnuson, 2013) than in studies of ECE quality (Burchinal, 2017) suggests that ECE can produce substantial gains in specific outcomes when it promotes those outcomes with evidence-based practices (p. 27).

> **Most of our quality measures focus on what a teacher is doing. Thinking about the child might give us a better picture. We want to measure how children in a setting may have different experiences. For example, a teacher may be focusing on a few kids—those who engage with her… The teacher may be doing wonderful things, but not with all children. In that case, it is important to have your quality measure reflect the fact that only some children are benefiting from good teaching practices.**
> (Burchinal interview, 10/9/20)

Discussion Questions

1. Consider an ECE program or a specific classroom that you have worked in, visited, or read about. It could be in any type of setting, including public, private, school, center-based, or home-based. How might this program define either overall program quality or individual classroom quality?
    - What factors contribute to quality from the program's point of view and from your point of view?
    - How much emphasis is placed on different elements of structural or process quality?
2. Which elements seem to be most important? Which seem to be least important? Based on your experience and reading, how can assessments of classroom or program quality impact practice? Consider both the positive and negative ways that these assessments could impact practice.
    - What is an example of how an assessment has shifted your practice and why?
    - Place yourself in the role of a coach or mentor. How might you go about evaluating practice in a way that shifts an early educator's practice to achieve desirable results?

3. How do differentiated instructional strategies relate to stronger child outcomes?
    - How do content-specific instructional strategies relate to stronger child outcomes?
    - How do they relate to overall program quality? Consider the field's shift in its understanding of quality, specifically the move away from a more global view of quality and the move toward a definition of quality shaped by intentional teaching strategies and specific content curricula.
4. In terms of ECE quality and child outcomes specifically, what might you personally want to learn from research?
    - What would you like to learn more about and what new insights would you like to gain?
    - How do you see yourself participating in this type of research?
5. What is the impact of questioning an existing widely used and widely accepted measure of classroom quality within the ECE field?
    - What are the challenges?
    - What specific consequences, both positive and negative, might this have on educators, children, and families?
6. In what ways can ongoing professional development be used to support the ECE community in its effort to uncover exactly how specific curricula and activities foster specific learning outcomes for children?
7. In what ways can professional development be used to build bridges between practitioners and researchers?
    - In your opinion, what do researchers need to understand about practitioners?
    - What can research gain from practitioner participation?
    - What are opportunities and challenges researchers might face when working with children and families? Why?
    - How can early educators assist?

2. Specific aspects of ECE quality appear to enhance children's early development. Preschoolers showed modest but statistically significant gains in academic and social skills when they experienced more frequent, warm, and responsive interactions with caregivers (Mashburn et al., 2008; NICHD ECCRN, 2002; Raver et al., 2011). Gains in academic skills are modestly larger when instruction includes detailed feedback, and sequenced and elaborated support for learning (Howes et al., 2008; Mashburn et al., 2008). Language and academic skills were higher when caregivers encouraged children to talk and engaged in multi-turn conversations that elaborated on a given topic (Justice, Mashburn, Pence, & Wiggins, 2008; Wasik & Hindman, 2011). Finally, gains in language and social skills were larger when children were offered a wide range of age-appropriate activities such as reading with adults, pretend play with peers, and play with books, blocks, water, and sand, demonstrating gains in language and social skills (Sylva et al., 2012) (p. 19 – 20).

> **Don't start with an assumption of what is quality. Be strategic. We need to think carefully about what skills we want ECE to promote, identify which activities promote those skills, and how can we implement them into programs in ways that engage children.** (Burchinal interview, 10/9/2020)

Discussion Questions

1. As a practitioner, you have instructional goals for your students, strategies to achieve these goals, and activities that you will do with children to achieve these goals via the strategies you have identified. Identify three goals and the associated strategies that you might use in a classroom to enhance some aspect of children's development.

    - Choose one of these goals. What activities do you offer in your ECE setting that support this goal?
    - Why is the home-school connection important?
    - Think of three children from different backgrounds and of differing abilities. How do you support each to engage with one of these activities?
    - How might you explain and demonstrate to family members how this activity supports their child's development?
    - What activities might you suggest families try at home to help achieve this goal and promote continuity in their child's learning?

2. Why is it important for early educators to provide warm and responsive interactions with children?
    - What message might it send to children?
    - What type of learning environment does it create?
3. What mindset and skills are needed for a practitioner to provide warm and responsive teacher-child interactions with all children in their classroom? How do you know?
    - How can the program leader, program policies, and overall program climate support this?
    - How can professional development support practitioners to do this?
4. Provide some examples of how program directors, administrators, and coaches can support early educators' instructional practice and thus promote quality.
    - As an educator, what do you think is important in the ways that program directors and coaches support you? What strategies should they use that would be most effective in enhancing your instructional practice?
5. Do you have a question about a particular aspect of classroom quality that might promote children's development?
    - Why is this question of interest to you?
    - How might answering this question help you in your teaching practice?
    - How might your query be shaped into a researchable question that you would like to investigate as part of a team with researchers?
6. Practitioners, researchers, and policymakers may have different understandings of classroom quality and how it is related to child outcomes. How might these different perspectives have an impact on your collaboration with researchers and policymakers?
    - Why do you think these different perspectives exist?
    - Why is it so important for researchers to communicate their work across ECE stakeholders?

3. Quality measures may need to focus more on the frequency and quality of intentional teaching. Recently, several measures have shown promise for expanding the measurement of ECE quality. They involve behavioral counts rather than ratings, and they vary in terms of whether the unit of observation is the teacher or multiple children in the classroom. Connor et al., (2011) developed an integrated system involving child monitoring, classroom observations, and instruction that has been shown to substantially improve reading skills in early elementary school; a preschool version is in the works.

Observational measures that describe how children spend their time and how teachers interact with them appear promising. One, the Snapshot (Ritchie, Weiser, Kraft-Sayre, & Howes, 2001), describes how much time individual children spend in different types of activities in terms of content area and instructional format (p. 23).

> **We are so strongly convinced that we know the answer, we don't stop to question. Of course, if you can provide high-quality interactions, children are going to do better. But when you look at quality measures, we don't see this. We've assumed that if you measure quality, that is what matters, but we don't focus on outcomes and what leads to these outcomes. Do not assume the current paradigm and widely used quality measures are sufficient to improve child outcomes long term. Don't be afraid to say we have improved quality but not outcomes.** (Burchinal interview, 10/9/2020)

Discussion Questions

1. Can you describe the experience of having a program, classroom, or home observed and assessed? Consider the implications of having a stranger in your program, classroom, or home observing you for a block of time and recording and evaluating your instruction, interactions, and activities. If you have not had this experience, imagine what it might be like from the point of view of the practitioner or the administrator.
    - How might this observation have an impact on the choices that an early educator makes for instruction and climate?
    - Do you think the observation will impact the children's behavior? Why or why not?
    - Thinking about how an early educator or administrator in the classroom or program experiences this observation, what aspects of the experience would be beneficial to share with researchers?

- Why might it be important for researchers to understand and be sensitive to the potential impact that these observations have on instructional practice?

2. In thinking about trying to capture quality as a collective measure of the experiences of all children in a classroom, what type of professional development can be used to encourage teachers to maintain successful early educator-child interactions?

    - As a practitioner, what types of self-assessment information would you find most helpful to enhance classroom/home quality?
    - What type of professional development can be used to ensure that all children are benefitting in an equitable way from the same curricula?
    - Pretend you are the director of a program with less than desirable quality observation measurement scores (e.g., ECERS, CLASS, Snapshot, etc.). Thinking about how scores are determined and how they are related to children's outcomes, how might you design a professional development initiative for your early educators in a way that improves scores on quality measures and children's learning using evidence-based practice?

3. How might program and home/classroom quality measures that show how children and educators spend their time enhance our understanding of quality?

    - How might these measures enhance our understanding of differences in the experiences of individual children?
    - How might these measures enhance our understanding of how educators interact with diverse children in the classroom?
    - How might race/ethnicity, home language, or family income of the children in these classrooms affect the results indicated in these measures?
    - What might these measures reveal about what is missed with rating scales that mostly evaluate classroom quality and/or assessment checklists?
    - How can these findings contribute to a better understanding of how early childhood programs and educators can support the needs of all children?

4. Referring to program and home/classroom observations of quality, what are three suggestions that you would offer researchers to help ensure they have minimal impact on interactions in your setting while gaining maximum insights into the experience of children and educators?

    - Why is it important for researchers to have minimal impact on the participants in the observation?
    - As an early educator, how might you partner with researchers to achieve minimal impact?

Moving forward.

"If we want to improve the lives of children, we need to look with fresh eyes at the data and understand what we are doing well and need to do differently." (Burchinal interview, 10/9/2020)

Discussion Questions

1. What does it mean to observe in ECE settings and look at the data with "fresh eyes"?
2. What knowledge, experiences, and assumptions about early care and education might influence researchers and practitioners as they observe home/classrooms and programs and then interpret the data? Are these the same for researchers and practitioners? Why or why not?
3. What knowledge, experiences, and assumptions might ECE researchers and practitioners have about each other?
4. How might looking at data with fresh eyes influence your work with a researcher?

SECTION 1, CHAPTER 2

WHAT ARE REASONABLE EXPECTATIONS FOR ECE PROGRAM EFFECTIVENESS?

Jeanne Brooks-Gunn, Ph.D., Teachers College and College of Physicians and Surgeons, Columbia University
Sarah Lazzeroni, Salesforce (formerly Teachers College, Columbia University)

***In What Are Reasonable Expectations for ECE Program Effectiveness?*, Jeanne Brooks-Gunn and Sarah Lazzeroni set a framework for reasonable expectations of early childhood education (ECE) program effectiveness given the great variability in quality, resources, duration, and children served. While comprehensive, high-quality ECE programs hold the promise of large effects for children at risk and very high returns on investment, the authors put forward what can be reasonably expected from programs under present conditions as policymakers and practitioners manage systemic changes to achieve ideal quality and outcomes.**

The summary above appears in the *Getting it Right Chapter Summaries* resource.

> **Our chapter focuses on looking beyond whether an effect is significant or not to focus on a pattern of findings and range of effect sizes by program, outcome, treatment dose, and comparison group. When we see patterns and are realistic, we can make a difference—we can provide one piece of the puzzle.**
> (Brooks-Gunn interview, 10/9/2020)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. What are reasonable expectations for ECE program effectiveness? The overlap is evident in that asking about expectations raises questions about what is reasonable today given the state of ECE quality, as well as the variability in quality. In general, ECE program impacts are expected to be small-to-medium, but not large[1] (p. 39–41).

All of this suggests that the counterfactual for treatment today is different from what it was previously. If children in control groups are enrolled in other preschool programs, the counterfactual is no longer preschool versus no preschool; it is a particular program (Head Start, universal pre-K) versus whatever other programs exist in a particular community (p. 45).

Consequently, it may be unreasonable to expect effect sizes today that are similar to those in the past if most children are now receiving some ECE at three and four years of age. This does not mean that preschool is ineffective. It just means that traditional evaluations of treatment and control will find smaller effect sizes, since most children in the control group are receiving some sort of preschool (p. 46).

If you don't know the context, a program's theory of change, all the things that naturally go wrong when you implement any program, your expectations are likely not realistic... When you have a program that shows a modest effect size and you expected a moderate-to-large effect size, you may think it failed. That is not true. You do make a difference. Don't be discouraged. Instead, go on!
(Brooks-Gunn interview, 10/9/2020)

Discussion Questions

1. What child development outcomes (e.g., cognitive, socioemotional, language) should be reasonably expected in the short and long terms due to ECE participation in general? Explain how these expectations might change within the context of a program that you are familiar with—either local or not.
    - What factors will influence the likelihood that expectations for child outcomes are met?
    - How does understanding community context (e.g., program history, resources, demographic makeup of children) influence expectations of program effectiveness and impact on child outcomes?
2. Describe how evaluations of programs and designs of programs can be influenced by the community in which they are conducted.
    - Think about a community with which you are very familiar, possibly the community you grew up in or the community where you go to school. What factors exist there that would affect the design of an ECE program? Provide concrete examples.
3. In comparing the Perry Preschool Program and the associated research study to preschool today, the authors of this chapter maintain that a 2:1 benefit-cost ratio is likely to be accurate. What does this mean?
    - What are some of the benefits and costs that this ratio refers to?
    - How does instructional practice contribute to this ratio?
    - What are key aspects of classroom or home-based practice that lead to such effects?

4. Think about your community and identify contextual factors that could influence findings if research were conducted in a program there.
    - What are these factors? Have they changed over time?
    - What might their impact be and why?
    - How might findings be influenced?
    - What might this mean for how findings are received and acted upon by a practitioner, program colleagues, the program director, families in the community, and policymakers?

2. Describing and examining effect sizes (p. 47–49). It is sometimes difficult for the public, policymakers, and educators to understand what an effect size means. For example, does an effect size of .40 on early indicators of achievement for low-income students mean they'll do better in elementary school, and how much better compared to high-income students? The same question, of course, could be asked for dual language learners or for minority students. Two approaches can help translate effect sizes into more concrete indicators. The first is to explain what might be seen in a classroom where low-income students' performance was one standard deviation below that of high-income students (p. 47).

Having a robust effect size is also important given the expected reduction in effect sizes throughout the elementary school years. Without additional services or improvements to early elementary school, the effect of ECE will fall to one-half of its initial size by the end of third or fourth grade. Therefore, an effect size of one-half will become one-quarter and an effect size of one-third will become one-sixth. Effect sizes that are lower than one-third are very unlikely to be sustained into the late elementary school years (p. 40). Another approach is to take an effect size at the end of a preschool intervention and estimate the increase in the number of children graduating from high school or college or predict kindergarten achievement scores to high school achievement scores (p. 48).

It will take a lot of time to come up with the answers we need and are looking for. Don't be discouraged. There is no quick fix for anything that is as important as changing children's lives for the better. (Brooks-Gunn interview, 10/9/2020)

Don't look at one effect size from one evaluation and think you have an answer. Look for patterns over time. Be realistic. Think context. (Brooks-Gunn interview, 10/9/2020)

Discussion Questions

1. What do we know about fade-out, or the reduction of short-term effect sizes regarding cognitive gains, when children reach elementary school?

    - Chapter 2 lists numerous characteristics of elementary schools that may contribute to fade-out, the expected reduction of ECE's effect size by one-half its initial size for children in the third or fourth grade. In your opinion, which one of these reasons is most responsible for the decline in effect size. Why?
    - What practice and policy changes in school and program administration can help promote continuity in children's learning throughout the continuum of care and education?

2. What are the factors that contribute to long-term life outcomes that persist after fade-out, such as higher earnings? Why are these important?

3. Promoting success: A multilevel model. Almost all ECE evaluations have assessed individual children, typically those who received an intervention and those who did not via random assignment, waitlist, or eligible age for entrance into preschool. But some have used administrative data as well. One interesting approach is to analyze school- or district-wide data from standardized testing to look at differences in achievement levels. In this way, comparisons can be made across time to see whether an intervention implemented at the school or district level has increased mean scores or competency levels... Such a cohort comparison was used effectively in the county-level effort in Montgomery County, MD (Marietta, 2010). The school district staff, after examining the proportion of the district's high school seniors who were ready for college, set a goal of having 80% of a graduating class college-ready. Working backward, they defined their goals for classes of pre-K to third-grade children. (p. 56–57)

Let's get real! We want to do the best for everybody, but we do have to be realistic. Language is a great example. Chances are if there is one child in a class who speaks Croatian, you won't be able to find someone to work with her. But you may be able to get her mom into an ESL so she can help her child with English. (Brooks-Gunn interview, 10/9/2020)

Discussion Questions

1. Looking at the list of Montgomery County reforms, what role did research play?
    - What research questions remain?
    - What reforms resonate with your knowledge and experience?
    - What lessons from this research can be applied within today's ECE context? Considering your own observations, what do we still need to know?
    - How might early educators contribute to effecting system changes?
    - How might early educators have been included in the research?
    - How might their participation have impacted the work?

Moving forward.

"We have framed our chapter in hopes that students will come away with a more realistic view of what we can expect. This is a new idea for many. Implementation research is about what really happens on the ground. It requires looking at what is really going on. And looking for patterns. It requires that researchers 'get real.'" (Brooks-Gunn interview, 10/9/2020)

Discussion Questions

1. How might Brooks-Gunn's suggestion to "get real" influence your work today or in the future?
2. How might her suggestion change your view of what you can contribute, or as she says earlier, "your piece of the puzzle" regarding the goal of ensuring strong outcomes for all children?
3. What are the implications for why it is important to create collaborations with researchers and other stakeholders in the ECE community?
4. What are the implications for collaborating with people across disciplines (e.g., economists, financial analysts, health care providers, etc.)?
5. What might be innovative approaches to measuring both short- and long-term effects?

SECTION 1, CHAPTER 3

USING A SOCIAL DETERMINANTS OF EARLY LEARNING FRAMEWORK TO ELIMINATE EDUCATIONAL DISPARITIES AND OPPORTUNITY GAPS

Iheoma U. Iruka, Ph.D., Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill (formerly HighScope Educational Research Foundation)

In *Using a Social Determinants of Early Learning Framework to Eliminate Educational Disparities and Opportunity Gaps,* Iheoma U. Iruka surfaces social policies and factors that maintain inequities and ensure early learning disparities. These structural factors limit resources and supports that directly impact children's outcomes, especially for low-income and minoritized[1] children and their families. She argues that to truly address early learning inequities and disparities, we must recognize systems that invisibly maintain and perpetuate inequities (and conversely privilege) from housing to education. For early childhood education (ECE) programs to meet their goals, the field must engage in more thoughtful, meaningful, and racially responsive research focused on understanding the causes and solutions for learning disparities and gaps. This will require the ECE research community to take an equity perspective that includes diverse voices and perspectives, especially those from minoritized communities, to examine how social and structural determinants impact children's outcomes.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

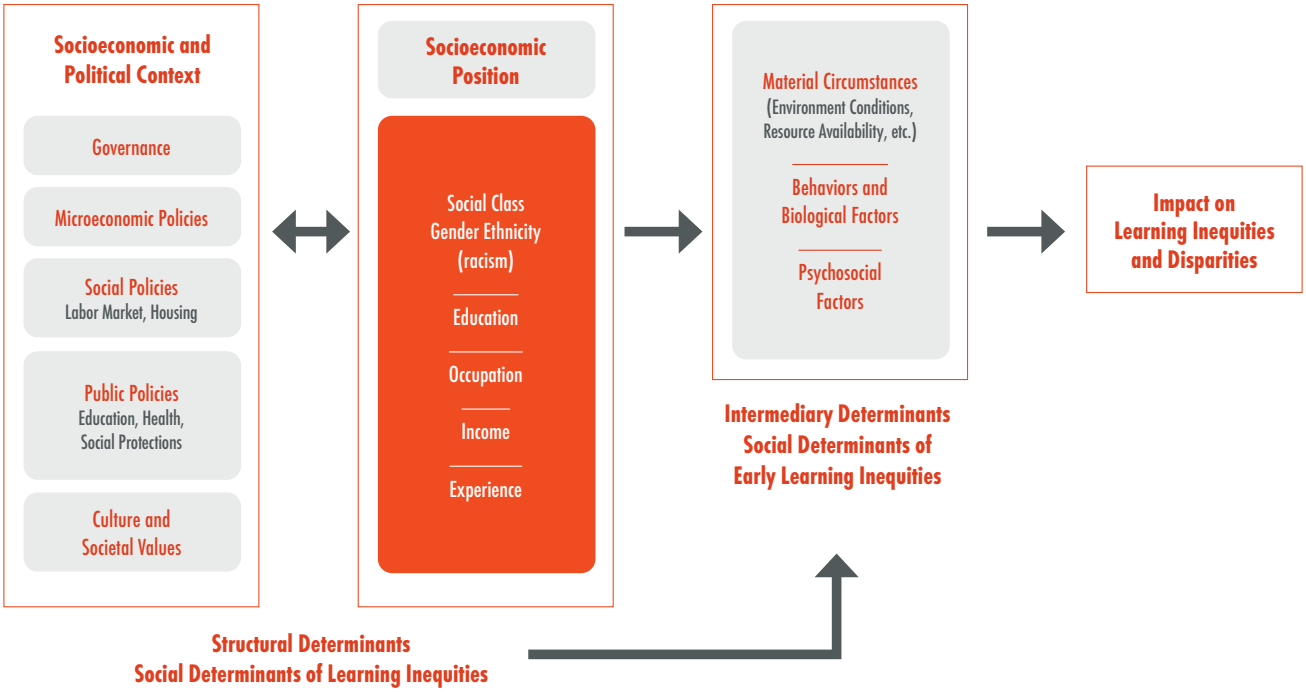
The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. With (the) economic and social cost of underutilized human potential and capability, the achievement gap, which is a symptom of systemic discriminatory policies and laws, needs to be treated as a public-health crisis. In this chapter, we adapt a framework used by the public-health sector—Social Determinants of Health (SDoH)—to address inequities and support the well-being of U.S. citizens at a population level (e.g., infant mortality and morbidity, teen pregnancy, or smoking) to show how early learning can address the inequities in education (p. 65).

For early childhood education to truly address early-learning disparities at the systems level, we propose adapting the SDoH to early learning, calling it Social Determinants of Early Learning (SDoEL) (see Figure 2).

The Centers for Disease Control and Prevention defines social determinants of health as "the complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities. These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout local communities" (p. 69).

Figure 2. Social Determinants of Early Learning.



Source: Centers for Disease Control and Prevention

As Figure 2 shows, the concept behind SDoEL is that socioeconomic and political contexts (e.g., social policies about housing and education) lead to individuals' socioeconomic position (e.g., education, income, or occupation), which then impacts their resources and living conditions, greatly reducing some children's opportunities to thrive (p. 70).

Bringing a public health framework to ECE can change our lens and help us see how we can support all children. (Iruka interview, 9/10/20)

Discussion Questions

1. Using your local context, create a graphic of a local SDoEL framework. Do the factors included mirror or differ from the one in Chapter 3?
    - What factors are missing?
    - What factors may need to be modified?
    - What policies and conditions change within the factors?
2. What roles might racism and poverty play in the lives of young children at home and in school?
    - How might understanding the SDoEL of a particular community shift your view of the lives of children and families within that community?
    - How might SDoEL be used in your work to help colleagues and program leaders see children and families through a "changed lens," as the author suggests?
    - What might SDoEL mean for an educator's instructional approach and curriculum?
    - What might SDoEL mean for program quality?
    - What might it mean for professional development and ongoing support of educators?
    - What factors within the SDoEL might change for individual children within one program or classroom?
    - How might this influence the education and care provided to children?
3. How might looking through an "SDoEL lens" impact the well-being and learning of the children you work with or your future students?
4. How and why is the idea of quality rating and improvement systems (QRISs) important in improving early learning programs or not?
    - How do QRISs take factors of the SDoEL into account?
    - What factors are not being considered?

- What role could research play in assessing QRISs and improving QRISs to benefit all children?
- What role might early educators and leaders play in assessing and shaping QRISs?

5. How might you use the SDoEL framework to ensure that researchers utilize the broader context of the population they are studying when looking at children's ECE experiences?
    - What insights might researchers need from early educators to ask the "right questions" in the "right way"?
    - How might looking at context via the SDoEL framework change the way that researchers communicate with practitioners and the population of study?
    - How might it change the way that researchers and practitioners interpret research results?
    - How might it change the way that practitioners apply research knowledge in practice?

2. ECE research must consider racism and discrimination using the SDoEL framework. For too long, most ECE research has indicated that many children of color and children from low-income households are not prepared for school and need early care and education programs. Unfortunately, most of the research, especially about children of color and their families, has been done with a deficit perspective, without consideration for the social determinants that lead to the disparities witnessed even after interventions. The results have often shamed and blamed children, families, and communities for low scores on language and cognitive assessments without considering the historical legacy of racism and discrimination and white supremacy that couches all aspects of early learning (p. 78).

> **All of us bathe and swim in the water of racism. Yet most of us don't see it or live it. If we don't see something, we can't measure it or learn about it.** (Iruka interview, 9/10/20)

Discussion Questions

1. How can personal beliefs and experiences with racism and discrimination influence classroom interactions, especially with children of color?
    - How can these beliefs and experiences influence expectations of children, especially children of color?
    - How can they influence expectations of children from low-income households?
2. What roles do racism and discrimination play in the lives and early learning experiences of minoritized young children today and in their later outcomes?
3. What are some examples of racist and discriminatory policies and practices present in ECE settings?
    - How might these policies and practices have come about?
    - How can they be changed?
4. Identify examples of racist and discriminatory policies and practices that might exist in a program in which you work, a local program that you are familiar with, or a program you have read about?
    - How could these be changed?
5. How can early educators more intentionally identify and build on the strengths of all children and families to promote children's development and learning? How might this, in turn, promote program quality?
6. What types of ongoing professional development conversations and activities might support a program's efforts to identify and build upon the strengths of all of their staff members?
7. What types of ongoing professional development conversations and activities might support a program's efforts to identify and build upon the strengths of all children and families?
    - How can professional development encourage educators to uncover and examine mindsets, assumptions, or prejudices they might be unaware they hold?

3. Though access to early learning opportunities has increased, academic and social gaps by income and race/ethnicity have not been eliminated. Education scholars see some reduction in these gaps, but "at the rates that the gaps declined in the last 12 years, it will take another 60 to 110 years for them to be completely eliminated" (Reardon & Portilla, 2016, p. 12). Thus, early learning in isolation will not close the achievement gap in a timely way. Researchers, in partnership with practitioners and policymakers, must uncover and address the root causes of racial and economic disparities, and find research-based specific practices and policies that can eradicate these gaps and inequities (p. 67).

Discussion Questions

1. What factors are leading to persistent achievement gaps and opportunity gaps in young children's learning and development?
    - How might such factors influence early educator-child interactions and instruction provided to children from various racial, ethnic, cultural, and linguistic backgrounds?
    - How might early educators, those who have similar backgrounds as their students and those who do not, respond to such factors in their instruction and interactions?
2. What does it mean to ensure equity and not equality when it comes to funding and resources for early learning programs?
3. How can research be used to ensure equity and address disparities?
4. How can researchers, policymakers, and practitioners collaborate to advance equity throughout the research process, from research questions to research design, data access, collection, interpretation, and reporting?

Moving forward.

> *"Humans change systems and systems change humans. Students are needed to be part of the change conversation. The questions they ask, their interactions with others are all opportunities to raise questions and to contribute to filling in the gaps of what we know." (Iruka interview, 9/10/20)*

[Is] it assumed that all children just require the same amount and type of sensitive and cognitively enriching interactions and instructions, without acknowledging their health, family and home condition, community environment, or narrative about their race or neighborhood? (p. 81)

Discussion Questions

1. How can researchers, policymakers, and practitioners include children and their families in their work to raise questions, contribute knowledge, and inform systems change?
2. How might collaborative thinking increase and enrich your insights into research-practice connections?
    - In what ways might you engage policymakers in this conversation?
3. What are the two most important points from Chapter 3 that resonate for you as an early educator?
    - What makes these points meaningful for your work?
    - How can these insights influence your work?

Notes

[1] Smith (2016) states that "groups that are different in race, religious creed, nation of origin, sexuality, and gender and as a result of social constructs have less power or representation compared to other members or groups in society should be considered minoritized." People who are minoritized endure mistreatment and face prejudices that are forced upon them because of situations outside of their control. https://www.theodysseyonline.com/minority-vs-minoritize

SECTION 2

WHAT STILL NEEDS TO BE UNDERSTOOD?

IN SECTION 2:

SECTION 2, CHAPTER 4

MAKING PREKINDERGARTEN CLASSROOMS BETTER PLACES FOR CHILDREN'S DEVELOPMENT

Dale C. Farran, Ph.D., Vanderbilt University

***In Making Prekindergarten Classrooms Better Places for Children's Development*, Dale C. Farran illuminates four prekindergarten classroom elements that lead to better child outcomes: listening to children, teacher/child interactions that encourage critical thinking, positive classroom environments, and children's active engagement in learning. These aspects of classroom functioning often fall outside current quality ratings, curriculum assessments, and standards. Farran points to the need to recognize, analyze, and measure these critical interactions between children and teachers, as they can impact outcomes more than current standards and measures do.**

The summary above appears in the *Getting it Right Chapter Summaries* resource.

If we are serious about investing more public money in pre-K, we need to come up with a composite set of measures for diverse teachers in diverse settings. As part of our composite set of measures, we need to pay attention to context of the setting. For example, in urban settings like New York City, pre-K programs are often placed in schools with empty classrooms. Because there is no classroom bathroom, safe playground or lunch in classrooms, more time is spent in transitions. The more transitions, the more behavioral control you have to assert as a teacher. We also have to look at the context of children's lives. Are there dual language speakers? Do they come from communities where there is a lot of violence? (Farran interview, 11/25/2020)

We always look for the silver bullet. We try to make things easier than they are as in, "Let's make teachers teach to a scripted skill-based curriculum." There are no silver bullets. I'm not saying we don't need a curriculum. But that the teacher's interaction patterns matter. And that we need to see teachers as thinkers. One size does not fit all when diverse teachers are working with diverse children. (Farran interview, 11/25/2020)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. As in years past, higher-income families were more likely than lower-income families to enroll their children in center-based care. Children from higher-income families often attend privately operated center-based child care programs, while children from lower-income families are likely to be enrolled in publicly funded programs such as Head Start and, more recently, state-funded prekindergarten programs (McFarland et al., 2017).

One consequence of this division is that segregation of experiences by income begins in preschool. Moreover, privately and publicly funded programs have very different expectations and regulations. The fundamental motivation for the two sets of programs differs as well: private child care programs are more concerned with "care" and being of service to parents, while the public programs are more concerned with compensatory education to remediate presumed deficits in children's preparation for school. This desire to offer compensatory education can lead to a greater emphasis on academic preparation and to more prekindergarten programs in public schools. An academic emphasis can have the unfortunate consequence of increased reliance on the sort of didactic instruction that may not lead to long-term child success (Lipsey, Farran, & Durkin, 2018) (p. 91).

Right now, states are putting programs into place without a lot of guidance. As a field, we need a unified, neutral effort to pull together researchers and practitioners to pull up their sleeves to define the foundations of quality and develop a compendium of tools to use with specific populations of children. It will take looking at what data says is important in classrooms for children. We will have to learn to compromise with each other. (Farran interview, 11/25/20)

Discussion Questions

1. How does the historical belief in the efficacy of early education intervention for children living in poverty shape early childhood education (ECE) research today compared to the past?
    - How have these beliefs shaped ECE practice over time?
    - How have these beliefs changed research questions over time?
    - As an early educator, how might you describe the potential benefits of early care and education?

2. Explain what is meant by compensatory education as a purpose of ECE. What does this purpose emphasize as the most important goals and features of ECE programs?
    - How have the goals and features of compensatory education changed over time?
    - Explain how instructional practices might reflect these changes.
3. How might compensatory education prevent opportunity and achievement gaps? How can K-12 educators work to ameliorate the fade-out of preschool effects?
4. Apart from those mentioned in the chapter, what are additional obstacles to scaling up small early-model programs into large-scale public programs?
    - How are small early-model ECE programs different than publicly funded ECE programs of today (in terms of children served, services provided, program staffing)?
    - How might a state, district, or program work around these obstacles?
    - How might the obstacles of scaling up programs differ across ECE settings?
5. How do current professional development (PD) efforts align or not with a compensatory education purpose for ECE programs?
    - Has the content and method of PD changed over time in relation to changes in goals for compensatory education?
6. How might the context of the program be a factor in PD needs and delivery?
    - How might PD supports be different in a program that emphasizes care for children as well as education of children?

2. The work reported by my colleagues and I (Farran, Meador, Christopher, Nesbitt, & Bilbrey, 2017) is the result of my four-year partnership among myself, a group of researchers in the Peabody Research Institute at Vanderbilt University, and the Metro Nashville Public Schools. This work derived from an observation system developed for research purposes in the 1990s (Farran, Silveri, & Culp, 1991). Highly trained and reliable observers remained in classrooms for a full day, taking data throughout the day, several times a year. The system yielded important information about practices that mattered most for young children's growth over the year and even into kindergarten and first grade. The practices determined to be important for children's growth over the preschool year came to be called "the Magic 8" by teachers and coaches in the school system. The appendix contains an example of how one of the practices, reducing transitions, was translated into a tool for coaches to use in our continuing partnership with the district (p. 95–96).

I've been interested in classroom observation since my graduate school days. I have learned that people are bad at rating things. As human beings, we just are. It is hard to use rating systems reliably. Most of us revert to our own judgements about what makes a good classroom. The other thing that happens with ratings is that if you ask one observer to look around a classroom and make a judgment as to how engaged children are, they tend to miss children who are quiet and unengaged. It is hard for human beings to make a judgment about how engaged groups of children are. (Farran interview, 11/25/2020)

Discussion Questions

1. What methods and tools are typically used to observe, document, and rate the quality of instructional practice in school, center-based, and home-based settings?
    - What are the limitations of approaches used or recommended?
    - How might the limitations be addressed?
    - What advice might you offer a researcher on how to assess a program or instructional practice?
    - How might the characteristics of the early educators and children influence the methods and tools chosen?
    - How might different contexts of settings, locations, and circumstances influence the methods and tools chosen?
2. How does the method of behavioral counts, as compared to behavioral ratings, change how the field understands instructional quality across settings?
    - What difficulties might researchers face when using these two methods to examine instructional practice?
3. What might be the benefits and drawbacks of including both behavioral ratings and counts as measures of quality in ECE research?
    - Which one is the more accurate measure of quality? Why do you think so?
    - Are both methods useful to understanding quality in practice?

4. What are some advantages and disadvantages of using a method of counting early educator behaviors to get an accurate measure of instructional quality?
    - How might different professional roles (e.g., educators, researchers) or stakeholders (e.g., coaches, program administrators, policymakers) vary in their response to this question?
    - What thoughts might parents have regarding measuring quality by means of counting behaviors as compared to rating behaviors?
5. How can program administrators and coaches use measures of behavioral ratings to help strengthen the practice of early educators?
    - How can they use measures of behavioral counts?
6. How can early educators use these methods to self-assess and inform their own practice?
7. How can coaches set the right tone of being helpful and informative when using behavioral counts with early educators versus it being perceived as a potential punitive measure of performance?

3. Four areas among the eight—teachers' listening to children, quality of instruction, positive climate, and child engagement—have also been investigated and found promising in several other studies.

Teachers' listening to children matters more than their talking to them. Language development and specifically vocabulary, has been one of the hardest areas to improve in early childhood classrooms. In general, however, few links have been found between teacher talk and child outcomes. Our research has shown that the amount of time teachers spent listening to children was actually the stronger predictor of children's growth (p. 96).

The teacher's quality of instruction is as important as the student's acquisition of basic skills. "Productive conversations," especially teachers' asking questions and listening to children's answers, are components of a more general factor related to the quality of instruction. In a recent book, William Gormley (2017) makes a persuasive argument that encouraging critical thinking through inferential teacher-student interactions may be one of the most important experiences in helping children be successful. He also argues that children from disadvantaged backgrounds are less likely to have these kinds of experiences (p. 97).

Positive classroom climates promote learning, and the importance of a positive learning environment cannot be overestimated, especially for young, vulnerable children who may be having their first educational experience in a formal setting. The classroom climate is particularly important for at-risk children, who typically have had a higher than average number of adverse childhood experiences. To promote resiliency in such children, the classroom must promote a sense of belonging, with caring and nurturing adults (Sciaraffa, Zeanah, & Zeanah, 2017). A highly negative classroom can actually function as an additional adverse experience, contributing to rather than buffering the cumulative stress that results in long-term negative health and social outcomes (p. 99).

Children's active engagement in learning is key, and engagement should not be confused with compliance. Children can be quiet and nondisruptive without being engaged. When children are actively involved in learning, they can be noisy (in a productive way). When young children are engaged, they are excited and highly attentive to the learning activity. Engagement is intertwined with all the other components described so far. For example, the level of positive emotional support in a classroom predicted children's level of classroom engagement (Castro, Granlund, & Almqvist, 2017) (p. 100).

Discussion Questions:

1. The author discusses four of "the Magic 8" practices determined to be important for children's growth and learning. Choose one and discuss it in the context of what you understand to be best practice. If possible, provide examples of instances of these instructional practices and observations of the ways children reacted to them.
    - How could you set up your future classroom or home in a way that best promotes this specific practice?
    - How can the four practices be combined in a real-life classroom or home setting?
2. How can factors of race, ethnicity, socioeconomic status, and neighborhood characteristics influence the way the four factors explained in this chapter are measured?
    - Choose one of these four elements and discuss how parents might apply these same approaches to learning at home.

"The Magic 8"

1. Reduce time spent in transition.
2. Improve level of instruction.
3. Create a positive climate.
4. Increase time teachers listen to children.
5. Plan sequential activities.
6. Promote cooperative interactions between children.
7. Foster high levels of child involvement.
8. Provide math opportunities.

Source: Farran, D.C., Meador, D., Christopher, C., Nesbitt, K.T. and Bilbrey, L.E. (2017), Data-driven improvement in prekindergarten classrooms: Report from a partnership in an urban district. *Child Development, 88*: 1466-1479. https://doi.org/10.1111/cdev.12906

3. Are there any additional elements that you think should be added to "the Magic 8"? Provide a research-based rationale for your addition.

4. What questions might remain about how and why listening to children, quality of instruction, positive climate, and child engagement seem to be effective?

    - What research questions remain for other instructional approaches that you think are equally important to children's growth?

5. What research questions would you ask to ensure that these four elements are best supporting all children's learning and development?

6. What factors do you think lead the field to continue to focus on structural features of ECE quality that potentially have small associations with child outcomes vs. identifying specific instructional approaches that promote children's learning?

    - What do you think prompted the shift toward looking at more process quality features and focusing on specific instructional content linked to children's learning?

7. How can "the Magic 8" improve early educator preparation programs and professional development systems to better support the ECE workforce in creating supportive, stimulating learning environments for young children?

    - What roles can research play in this?

    - Similar to the reducing transitions activity described in the Appendix of the publication, take one element of "the Magic 8" and translate it into a tool for coaches.

    - Take the same element and translate it into a self-assessment tool.

Moving forward.

"We have to decide what it is we want to know about classrooms, and it may be different depending on the children who are learning there. For example, if there are a high number of DLLs, we should come in with a tool that looks at kids who are learning languages. The same with children who come from communities of high violence who might benefit from a tool that focuses on creating a safe, accepting, warm environment." (Farran interview, 11/25/2020)

Discussion Questions

1. How can evaluative tools and measures identify both enriching and supportive instructional practices for all children?
    - How can evaluative tools be responsive to the needs of children from racially, ethnically, culturally, linguistically, and socioeconomically diverse backgrounds?
    - How will genuine collaboration between early educators, researchers, and policymakers contribute to the development of such measures and tools?
    - What do you bring to the table that is needed and why?

SECTION 2, CHAPTER 5

IMPROVING QUALITY AND IMPACT THROUGH WORKFORCE DEVELOPMENT AND IMPLEMENTATION SYSTEMS

Robert C. Pianta, Ph.D., University of Virginia

Bridget K. Hamre, Ph.D., Teachstone

In *Improving Quality and Impact Through Workforce Development and Implementation Systems*, Robert C. Pianta and Bridget K. Hamre point to the need for systematic improvements in professional development (PD) systems to provide children with effective education across early childhood settings. Though professional development is widely used as a strategy to improve child outcomes, it is hampered by varying standards across states, less than effective coaches, and gaps between how implementation science says it should work and how it is practiced. Professional development provided with greater intention and integration is more effective and offers a unified quality experience for children across settings and teachers.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

> **We want folks out there in the field to use evidence to guide their decisions. Yet, evidence-based is not a pill you can take to improve outcomes. Educators are told to adopt evidence-based curriculum and assessments, for example. Evidence tells people that in general, under certain circumstances, this outcome is more likely. It tells us about a general tendency. But we can't leave them there. We have to take them further so that they are saying, "I need to think about this evidence and if and how it applies to me and whether I can replicate conditions that I am reading about in this brief."**
> (Pianta interview, 11/9/2020)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. Recognizing the need and value for PD, policymakers have made significant investments in the workforce, which is a first step. But that investment does not focus enough on proven-effective PD models. Unfortunately, teachers rarely experience PD that reflects features of specificity and alignment to practice. In fact, a recent survey that was representative of the 1 million teachers in center-based programs for children aged 0 to 5 years indicates that the predominant form of PD is a one-hour workshop only tangentially connected to teachers' everyday practice and known to be ineffective (McCormick Center for Early Childhood Leadership, 2016; Zaslow, Tout, Halle, Whittaker, & Lavelle, 2010) (p. 113).

Discussion Questions

1. Have you had any experience with professional development that either does or does not compare with that of other early educators surveyed?
    - If you have had a similar or dissimilar experience with PD, explain.
2. Why do you think there is an apparent disconnect between professional development and early educators' everyday practices?
    - How can early educators work with coaches and administrators to tie PD to practice and close this gap?
    - What role could research play in this effort?
3. How does a connection between PD and practice (or lack of) impact your sense of professionalism?
    - How could it shape the decisions you make each day about how to interact with children and extend their learning?
    - How could it impact your work with families?
4. What challenges does a fragmented early childhood education (ECE) system pose to providing effective, consistent professional development?
    - How could these challenges be overcome?
5. How do the lack of agreement about and nonexistence of a set of minimum qualifications for early educators who work in different settings contribute to the need to examine and improve workforce development?
    - How does the fact that there is little agreement about performance standards for early educators or how to measure these standards contribute to PD frequently not reflecting or aligning with practice?
    - How does this lack of performance standards affect the daily working lives of early educators?
6. How does the low compensation of the ECE workforce affect instructional practice and the investments made in professional development supports?
    - How would increased compensation affect both?

- What research questions would be helpful to learn about compensation effects?

7. How can research be used to evaluate the interaction between early educator preparation programs and professional development systems in a way that benefits workforce development?

    - How can both pre-service and working early educators work collaboratively with researchers to do this?

8. Based on your experiences and the content of this chapter, what changes would you recommend to ensure a clear connection between professional development and practice?

2. Implementation science can offer a framework for knitting together the potential of proven-effective training and PD with the everyday realities of classroom practice, program capacity, and surrounding systems. This is because implementation science, with its focus on identifying and engineering the conditions that influence and explain strong and weak implementation, can create the kind of systemic and aligned programs of professional training and development that foster improvements in classrooms and impacts on children (p. 114).

> **The only way this work can be done is by researchers in collaboration with practitioners working as partners for a bigger purpose… Very often the translation of research is conducted by the person who generated the original piece. But how can you translate without seeing how it lands?**
> (Pianta interview, 11/9/2020)
>
> **Implementation science can provide the young researcher with an intellectual home.**
> (Pianta interview, 11/9/2020)

Discussion Questions

1. What factors might be responsible for the fact that the successful translation of new knowledge into effective professional development tools is in the authors' words, "spotty and weak?"

    - What advice would you offer researchers about translating their findings so that they are useful and applicable to early educators and ECE practice?

    - What opportunities and drawbacks might there be if practitioners were able to work more collaboratively with researchers in translating research findings and designing effective PD tools?

2. What are some implementation research questions that can contribute to improving the quality and usefulness of educator professional development?

3. What are some implementation research questions that can help shape professional development approaches and content that are responsive to the diverse needs of early educators aiming to improve their practice?

    - How might these studies change depending on your state or locality?

    - How might these studies change depending on the ECE setting?

    - How might they change depending on the demographic characteristics of the early educators and the children participating in the ECE program?

4. How do the systems that surround ECE programs interact with these educator preparation and PD initiatives?

    - What role can research play?

3. Reports have clearly described the features of PD that relate to improved practice and student learning (Zaslow et al., 2010). When targeted, practice-aligned PD supports are available to teachers, student skill gains can be considerable—at times on the order of half a standard deviation and higher in some subgroups.

Focus on teacher skills and relevant knowledge. A starting point for identifying, implementing, and eventually scaling effective PD is to consider the PD target and the system in which it will be implemented. As Burchinal (this volume) suggests, classroom observation of teacher practice is often viewed as a source of information on the focus or target of PD, as is teachers' knowledge of children's development or of a curriculum.

It may seem obvious that PD should focus on evidence-based teaching practices, but experience and the limited available data suggest that much PD for teachers does not do so. In one review of 256 published studies of ECE PD, only 25% had explicitly focused on teaching practices (Snyder et al., 2012). And the vast majority of practice-focused PD targets more generalized teaching practices, early literacy, and/or social-emotional teaching (Schachter, 2015).

Ensure sufficient intensity and duration. Intensity and a greater duration of PD consistently leads to improvements in teachers' practice (Garet, Porter, Desimone, Birman, & Suk Yoon, 2001; Markussen-Brown et al., 2017). Markussen-Brown and colleagues (2017) reported a wide range of intensity among the studies they included in their meta-analysis of PD, from six to 450 total hours; they found greater changes in teaching practice among PD programs with greater intensity. Unfortunately, we do not know exactly how much PD is enough, though it is likely that the answer depends greatly on the desired outcome.

In sum, ample evidence from rigorous experimental studies shows that PD focused on teacher practices or relevant knowledge can improve the quality of teachers' skill and, to a lesser extent, children's learning. We have curricula, methods of practice, and tools that can predictably improve teachers' knowledge and skill, and a number of them also show evidence of further benefits for children's learning. At the same time, there is fairly broad agreement that PD for ECE teachers as typically implemented by states and school systems throughout the country is not all that effective. The opportunity to deploy PD investments for greater impact holds tremendous promise for improving the benefits of programs for children (p. 115–118).

> **We have made ad hoc arrangements around curriculum, instruction, and data. But now we've moved the needle. We are entering a new frontier with implementation science and improvement science. We know "X" works. How does it get employed? What are the decision scaffolds? There is now a science to help us answer those questions.** (Pianta interview, 11/9/2020)

Discussion Questions

1. Are there benefits and challenges for building a professional development system that spans the continuum of birth through third grade?
    - What role can researchers and practitioners play in such an effort?
    - Who else should be engaged in this effort?
    - What benefits could such a collaboration bring?
    - What challenges could arise?
2. What factors contribute to the success of the high-fidelity implementation of professional development and the successful scaling up of such PD?
    - What role can research play?

4. To improve the quality and impact of programs at scale through workforce development, we must explicitly specify the enabling architecture—the incentives, standards, training and implementation protocols, quality control procedures, and certifications that shape the actions of various people in the system (teachers, purveyors, programs) to produce high effort and focused participation. All too often, these components of a workforce development system are misaligned with one another, with the needs of the workforce, and with the support structures needed to deliver the types of proven-effective PD described here (p. 118).

Next, we identify several conditions that are key to closing the gaps between PD that has been proven effective under local or controlled conditions to implementation with benefits at scale (p. 120).

Use a clear and focused PD program or model. Zaslow and colleagues (2010) have described the features of effective PD programs, which include a focus on:

> *a) students' skill targets and developmental progressions (e.g., developmental progressions in decoding skills); b) improving teachers' skillful use of instructional and social interactions to promote student engagement and learning (e.g., feedback or conversation); and c) fostering teachers' skills and knowledge to effectively implement curricula and appropriately engage children with content (e.g., delivering an effective and engaging activity on teaching cardinality).*

Provide necessary supports for the PD workforce. PD's success depends in large part on the people who train and coach teachers. This means hiring, training, and supporting the PD workforce. But little research has examined these elements of program delivery, and many evidence-based PD models fail to provide much detail about them.

Among evidence-based PD models that do provide such detail, this workforce typically consists of experienced ECE teachers, often with master's degrees, who have relatively extensive training and ongoing support in the particular PD model (McCollum, Hemmeter, & Hsieh, 2011; Piasta et al., 2012; Powell, Diamond, Burchinal, & Koehler, 2010). Lloyd & Modlin (2012), reporting on how they delivered three coaching models in Head Start programs, suggest that successful coaches have three major attributes: knowledge of the coaching model, general coaching and consultation skills, and knowledge of early childhood development and teaching.

Use data to target and improve PD. However, data can not only help to focus PD but can also track its implementation and success. Lloyd & Modlin (2012) describe a simple but effective method for supporting the coaching delivered as a part of the Head Start CARES project. They use brief online surveys, logs, and fidelity reports to help support technical assistance and management in their monitoring of coaching implementation. Similar systems are provided with the scaled-up version of MTP [MyTeachingPartner] (Early et al., 2017). Even the simplest information, such as logs of the frequency of contacts between teachers and coaches, can be powerful ways to improve the intensity of coaching if they are used to monitor coaches' efforts and provide feedback. ... As states build systems of PD support online and link them to various forms of credentialing (including micro-credentialing), the result can be more fully integrated alignment of teachers' PD needs and goals, PD inputs to teachers, supports for effective delivery (by coaches, instructors, or web systems), and structures that codify and encourage teachers' participation and progress.

Link workforce development systems and incentive structures. However, registry systems are being developed that codify individual teachers' records of acquired PD (National Registry Alliance, 2013a) and perhaps even the competencies they attain, which will mean greater capability to identify and encourage effective PD as well to tie those experiences to accrued competence and certifications.

Certify PD providers. The skills and impact of those who provide PD support to teachers and programs vary widely (Soliday-Hong, Walters, & Mintz, 2011), and there are very few systems for documenting their expertise and effectiveness. Although almost half of the states have developed tracking systems for PD providers (Institute of Medicine and National Research Council, 2015), none have effectiveness metrics or standard certifications and training. Some have moved beyond tracking to comprehensive training and certification requirements for providers.

In some states, PD providers must register and complete training (National Registry Alliance, 2013b), but these systems are typically voluntary and their requirements are not particularly stringent. Clearly, PD providers and coaches need more intensive training and certification programs (p. 121 – 123).

Discussion Questions

1. A clear and focused professional development model is the first condition listed for implementing PD with impact. Why is it important that curricula, assessment, and other enabling supports are aligned?
    - How can research be used to ensure this alignment?
    - How do practitioners support alignment?
    - How can early educators, administrators, and coaches separately support this alignment?
2. Of the elements of professional development listed in Chapter 5 that are effective in helping to improve practice, which do you think are the most important and why?
    - Why do professionals in the field struggle to provide PD that has these elements embedded?
    - What are you seeking in professional development? (This could be answered more generally, based on what you anticipate your experience to be, or more specifically, based on your actual experience in ECE settings.)
3. Should coaching practices be the same across different types of ECE programs, settings, children served, etc.? Why?
    - If not, what kinds of differences might you expect?
    - What would be optimal?
4. Design a workforce development system, including incentives, competencies, training and implementation protocols, quality control procedures, and certifications, that could encourage effective professional development.
    - How would you ensure your system is aligned with workforce needs?
    - How would you ensure your system has the appropriate supports?
    - How would you incorporate technology into this system?
    - What research questions would help evaluate the system's effectiveness?

- How could you measure the fidelity of this system's implementation to intended purposes?
- What fidelity issues might arise in practice?

Moving forward.

"Any translated research product has to be framed and written and content exposed from the perspective of the person who is reading it. As researchers, we have to figure out a way that the translation reflects the complexity of the issue. For example, what you have evidence for and don't have evidence for. We have to respect both the complexity of the science and respect the practitioners' ability to understand and use findings in their decision-making and work." (Pianta interview, 11/9/2020)

Discussion Questions

1. As an early educator, what steps do you think you can take to ensure that research findings on professional development are applied in ways that are understood and used by the field?
    - What steps does the field need to take in general? Why do you think so?
2. What role can you see yourself, as an ECE professional, playing in building a connection between what we know from research about effective PD and what we do as a field to support professional learning and development?

SECTION 2, CHAPTER 6

ADDRESSING EQUITY IN THE ECE CLASSROOM: EQUAL ACCESS AND HIGH QUALITY FOR DUAL LANGUAGE LEARNERS

Linda M. Espinosa, Ph.D., University of Missouri-Columbia

In *Addressing Equity in the ECE Classroom: Equal Access and High Quality for Dual Language Learners,* Linda M. Espinosa discusses research outlining the benefits of early bilingualism. She also presents strategies that all early childhood education (ECE) teachers can implement to support dual language learners' (DLL) improved outcomes through the acquisition of English, while also maintaining their home language. Directions for future implementation research are provided to help fully understand factors that influence early bilingualism, the attendant cognitive, linguistic, and social advantages, and effective practices for instructing and assessing DLLs.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

> **The study of bilingual children is almost its own field of study. Who are these children in the U.S.? How are decisions about how and what to teach them and how to measure their progress impacted by the fact that they do not speak English at home and may have a varied culture?**
> (Espinosa interview, 11/24/2020)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. Historically, most research examining the growth, progress, and achievement of DLLs has focused on differences between DLLs and non-DLLs, judging DLLs' performance using norms designed for English-only populations without considerations for the unique linguistic and developmental trajectories of children whose first language is not English (Center for Early Care and Education Research—Dual Language Learners, 2011). This approach has often led to a "deficit perspective" that views DLLs as having less potential and fewer academic abilities than their monolingual English peers because of their lack of English proficiency. In fact, policymakers have sometimes referred to "the extra burden" of having to learn two languages during the early years. The deficit perspective, however, often negatively affects teachers' views of DLLs' potential, and it is, moreover, contradicted by current research (p. 135).

The scientific consensus is that children who become fully proficient in both their home language and English are likely to reap benefits in cognitive, social, academic, and professional outcomes and to be protected from brain decline at older ages (NASEM, 2017). This suggests we should view the development of DLLs through the powerful advantages of having more than one language. The assets associated with bilingualism and biliteracy have been well documented and should be recognized and supported (p. 135).

I think the discrepancy between what academics know and what practitioners implement is huge. There can even be a discrepancy between what some practitioners know and do. People have distorted views of how successful these children are. Too few see these children as advantaged because they speak more than one language. In fact, our achievement data shows them behind because they have been improperly assessed and understood. (Espinosa interview, 11/24/2020)

Discussion Questions

1. What does it mean to take a strength-based vs. deficit-based approach in practice and research?
    - What are some examples of what each looks like in various ECE settings (e.g., an infant and toddler setting, a program serving children with special needs, and a program with DLLs)?
    - What knowledge is required to utilize a strength-based, asset-based approach in instructional practice?
    - How can such an approach change practice and, ultimately, outcomes for children?
2. Why do you think deficit-based assumptions about the development and learning of DLLs persist in practice and research?
    - How might these assumptions impact practitioners' instruction and support of DLLs?
    - How might these assumptions have an impact on children's experience of learning in schools, centers, and homes?
    - What practitioner characteristics might influence the assumptions they hold about different groups of children?
    - How can practitioners unlearn or work around these assumptions to better instruct and support DLLs?

- How can early educators use an asset-based perspective to frame their instruction?
- How do such considerations influence research related to DLLs?
- What role can you, as a practitioner, play in supporting researchers to frame research from an asset-based perspective?

3. What additional research might be needed to help move the field away from this deficit-based perspective that is so common in research and instructional practices and more toward an asset-based perspective that focuses on the strengths of DLLs?
    - What are different ways families can play a role, both in the construction of the research and participation in the research?
4. As a practitioner, how can you best support children's home languages in your classroom? Why is it important to do so?

2. 2017 report by the National Academy of Sciences, Engineering, and Medicine (NASEM), *Fostering the Educational Success of Children and Youth Learning English*, offers a research synthesis on the development and achievement of DLLs from birth to age 21. This consensus study has yielded a comprehensive view on language development, school practices, and educational policies that impact DLLs' growth and school success. It reports four major interrelated conclusions that are central to improving the educational outcomes for DLLs. First, all children are capable of learning more than one language from the earliest months of life and benefit from early exposure to multiple languages. Second, high levels of proficiency in both the home language and English are linked to the best academic and social outcomes. Third, the earlier a child is exposed to a second language, the greater their chances for full bilingualism. Fourth, home language loss is currently the norm for DLLs, particularly once they enter English-speaking ECE settings, which undermine the possibility of full bilingualism and may place the child at risk for unhealthy family relations, including estrangement from their cultural heritage (p. 138–139).

Because most in our field do not have a background in dual language children, people have defaulted to simplistic ideas of how these children are different and how to determine their accomplishments. We are making progress. For example, we've designed an in-depth family interview to learn about a child's exposure to English. But there is so much more to be done… I often tell people, "Make a tentative hypothesis about why a child is or isn't performing and 'keep the doors open' as you check into what might be reasons why. Language development can be uneven—even for kids who speak one language." (Espinosa interview, 11/25/2020)

Discussion Questions

1. As you review the Summary of Findings of the NASEM report (2017), what findings are in line with what you knew or expected? Which of these are similar to or different from your expectations?
    - What are the implications of these findings for your work with children?
    - How might you change your practice when working with DLLs as compared to monolingual children?
    - How might you change your practice when working with children who speak multiple languages?
    - What are the implications of these findings for your work with families?
    - What research questions still remain?
    - How can researchers and practitioners make these findings more available to professionals and the lay public?
2. Consider the extensive summary of research findings on page 138. How might these findings be useful or not for practitioners and policymakers to identify ways to better support and instruct DLLs?
    - What roles might practitioners take to support dissemination of these findings?

3. What research questions are needed to help practitioners integrate DLLs' home languages and the needs and wants of families into classroom practices?

    - What could be the benefits and challenges of having an early educator who comes from a background similar to DLLs in the classroom?
    - What could be the benefits and challenges of having an early educator who comes from a background that is dissimilar to DLLs in the classroom?

4. What factors should be considered in implementation research related to examining how instructional practice influences the bilingual and multilingual development of young children?

    - What strategies might researchers, policymakers, and practitioners use to partner with DLLs' families to promote and support these practices at home and in the classroom?

5. How can program administrators and coaches use PD to help support early educators in working with DLLs?

Summary of Findings of NASEM (2017) Report for DLLs 0-5.

The major findings about DLLs ages birth to five from the NASEM (2017) report include the following:

- All young children, if given adequate exposure to two languages, can acquire full competence in both languages;
- Early bilingualism confers benefits such as improved academic outcomes in school as well as enhancement of certain cognitive skills such as executive functioning;
- Early exposure to a second language–before three years of age—is related to better language skills in second language, English;
- The language development of DLLs often differs from that of monolingual children: they may take longer to learn some aspects of language that differ between the two languages and their level of proficiency reflects variations of amount and quality of language input;
- The cognitive, cultural, and economic benefits of bilingualism are tied to high levels of competence including listening, speaking, reading, and writing in both languages, e.g., balanced bilingualism at kindergarten entry predicts best long-term outcomes;
- DLLs should be supported in maintaining their home language in preschool and early school years while they are learning English in order to achieve full proficiency in both languages;
- DLLs' language development is enhanced when adults provide frequent, responsive, varied language interactions that include a rich array of diverse words and sentence types. For most DLL families this means they should continue to use their home language in everyday interactions, storytelling, songs, and book readings;
- There is wide variation in the language competency among DLLs that is due to multiple social and cultural factors such as parents' immigration status and number of years in U.S., family Socio-Economic Status (SES), status of home language in the community, resources and amount of support for both languages.

Source: NASEM (2017). *Promoting the educational success of children and youth learning English: Promising futures*. The National Academies Press.

3. It is important for educators to recognize that there are differences between DLLs and monolinguals. Preschool DLLs seem to show a different pattern of strengths and needs than monolinguals. They are at risk for low levels of oral language development if they don't receive frequent high-quality enriched language learning opportunities in both languages. Their basic mathematical understandings may differ from those of English speakers if their first language uses different language constructs for expressing math concepts such as counting, plurals, grouping, and so forth. They may also excel in certain executive function skills such as cognitive control, and they often demonstrate social-emotional strengths (NASEM, 2017) (p. 140).

To provide equitable early education to linguistically diverse children, ECE teachers must consistently implement a set of instructional adaptations across multiple settings. One core necessity here is to recognize that these children are learning content or conceptual knowledge at the same time that they are also learning the language in which that content or concept is expressed. Thus, instructional approaches that focus on monolingual English speakers need to be adapted and enhanced (Castro, Espinosa, & Páez, 2011; NASEM, 2017) to build on what children already know in their first language while they are also adding English (p. 133).

Implications of research for instructional practices for DLLs. Before teachers can specifically address instructional goals and strategies for DLLs, they must first get to know the children. They need to gather formal and informal information on their students' backgrounds and their early language learning experiences as well as abilities, including how much exposure they have to both the home language and English and how much they use each. During face-to-face interviews with parents, teachers can learn about family values, language preferences, cultural traditions, and the ability to partner actively with teachers in the classroom (p. 142–143).

Although common features of high-quality early education described throughout this volume are beneficial for all children, DLLs require additional instructional support. The NASEM report (2017) outlines a number of instructional strategies and enhancements that have been linked to improved achievement for DLLs in early education settings (p. 143).

Currently, few states require ECE teachers who work with young DLLs to have specialized training or coursework focused on meeting the needs of such children and their families (Espinosa & Calderon, 2015). The NASEM (2017) report concludes, "The educator workforce, including early care and education providers, educational administrators, and teachers, is inadequately prepared during preservice training to promote desired educational outcomes for dual language learners" (p. 462) (p. 145).

Unless you believe "in your bones" that having a second language in addition to English is a gift, and not a disadvantage, and diversity is a resource, not a problem to be solved, you are likely to respond to DLL children in ways that discourage the continued use of the home language, especially if you are not fluent in the child's home language. (Espinosa & Magruder, 2015, p. 80) (p. 142)

> **Programs with three, four, five languages usually end up just teaching children English. They say, "We can't bring in all these languages." It's just not true. There are methods to address cultural and language diversity. Most people in our field don't have backgrounds in dual language children, so they think either dual language (hopefully) or teach only in English.** (Espinosa interview, 11/24/2020)

Discussion Questions

1. Before this discussion, what did you already know about how DLLs develop?
    - What new information did you learn?
    - What steps might you take as an in-service practitioner to ensure that you are integrating research into your understanding of DLLs and into your practice generally?
2. Apart from those listed in the text, what are some other potential differences between DLLs' and monolinguals' learning and development? Consider factors such as home language prominence, instructional content and practice, family culture and values, and school culture and values.
    - How might practitioners use this knowledge in their practice to best meet the needs of all children?
3. How might an educator's knowledge and assumptions influence whether instructional content and strategies to foster bilingual and multilingual development are integrated into a program daily?
    - How might these assumptions influence a child's experience?
    - How might they have an impact on a child's development and learning?
4. What would instructional practice look like if early educators reject a deficit approach and promote an asset-based approach to working with DLL children?

5. What are realistic expectations for including every child's language in classrooms?
    - What strategies could be used to ensure that every child's home language is included?
    - Why does this matter to children and their families?
6. What research considerations need to be made to most accurately assess and measure DLLs' development, including their learning of specific skills such as language, literacy, and math?
    - How might a research team collect data to best assess DLL children?
    - As a practitioner, how could you assist data collection efforts to accurately assess DLL children in your classroom or home?
7. How should implementation research be designed to help practitioners learn about and understand the family context of DLLs?
8. How should implementation research be designed to best meet the needs of all children?
    - What should be learned about a family's culture, values, and views of their home language and English?
    - How might this knowledge influence interactions with a child?
9. As you read core content elements (p. 145) and competencies (p. 146), which do you think are most important in your practice?
    - Choose one core content element and one competency. Explain in detail how you, as a practitioner, would ensure that you are meeting them both.
    - Based on this list, what research questions do you think were missed that are equally important when working with DLLs?
10. In what ways can ECE and PD systems be enriched to include the content, elements, and mindset necessary for educators to provide an equitable education to both DLLs and monolingual children?

Moving forward.

Substantial research has been done on the capacity of all children to successfully become bilingual, the factors that influence early bilingualism, and the attendant cognitive, linguistic, and social advantages, and there is also an emerging scholarship on effective practices for DLLs. Yet there are still many gaps in our knowledge (p. 147).

Discussion Questions

1. As you read the questions posed by Espinosa on pages 134 and 147–148, choose one that you would like to study with a research team.
    - Why is this your choice?
    - What would your hypotheses look like for the study questions?
    - As a practitioner, what do you see as your contribution to the research team?
    - What insights, information, and experiences will inform your contribution to the work?
    - Who would you recommend as other collaborative partners on this research team, and how would they benefit the project?
    - What practical or logistical considerations may arise during this project?
    - How would you work around them?
    - How would you use the results of your research in practice?
    - What additional research questions might stem from this study?

SECTION 2, CHAPTER 7

VIGNETTE: BUILDING A HIGH-QUALITY PROGRAM– THE BOSTON PUBLIC SCHOOLS EXPERIENCE

Jason Sachs, Ed.D., Boston Public Schools

In *Vignette: Building a High-Quality Program—the Boston Public Schools Experience*, Jason Sachs, who established and continues to lead the expansion of the Boston Public Schools system's Prekindergarten-2nd grade program, relates his and his staffs' experience in building an equitable, high-quality early childhood education (ECE) system that produces measurable outcomes. Sachs talks about the keys to success: committed city leadership; a focus on the child; resourcing staff, principals, teachers and paraprofessionals to do their best work; developing strategic plans; and using data for evaluation that feeds continuous improvement.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

Sachs offers a window into building and scaling up the Boston Public Schools' prekindergarten to second grade program. He describes the intentional use of research to guide change and the realities encountered while conducting implementation research (p. 8). The experience of the BPS Department of Early Childhood grounds this volume by presenting the initiative's context and the "real work" of practitioners and researchers collaborating over the last 14 years on a path to achieve their mission. Supporting his work–and that of others in the field working day by day to create stronger outcomes for all children–is the purpose of implementation research.

The three activities below are designed to help students consider key elements of effective implementation research as they begin to intentionally determine their stance as practitioners and as practitioners engaging in and using research: consideration of context, development of genuine research collaboration, and the need for and development of tools to assess fidelity.

The first activity focuses on the importance of context in designing and implementing an ECE program or system. The second invites students to consider the need for genuine collaboration and the "natural tensions" that can occur as researchers, practitioners, and policymakers strive to implement evidence-based, informed practice throughout all the phases of implementation research. Activity three leads students to explore the need for and development of fidelity tools to measure whether a program's delivery matches the program's original intended model and purpose. Each activity is designed to be thought-provoking and to challenge students to apply insights about implementation research to real-world situations.

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. Context is key to continuous quality improvement efforts. At the opening of Chapter 7, Sachs invites readers to "become like the horse breaking free–taking what is useful for their own contexts." He shares his hope that "this article will help your work as you set out to build or improve your own preschool systems and partner with your own public schools."

Articulating a change theory, strategic plan and processes, and protocols help people put their egos aside as they build a collective will and interactions. People see where and how they can fit in. You know where you want to go and have a roadmap to get started on your way. (Sachs interview, 11/17/2020)

Activity

In small groups, think about how to "break free" in considering designs for ECE programs and using research to refine the implementation of an ECE program or system in your own local context. Choose a specific ECE program or system and consider contextual factors like program/system purpose, whether the program/system is being implemented as planned (why or why not), who is the program serving and how well, what implementation supports are in place or not, what the characteristics of the population implementing the program and of those receiving the services are, and if data is available on program implementation outcomes and child outcomes. As part of your deliberation, also reflect on the key lessons learned by BPS (p. 165–172) as they worked to continuously improve the quality of their ECE program/system. After your discussion, write down brief answers to the following questions:

1. What refinements are needed to the program or system, for what purpose, and what are the intended outcomes?
    - What is the rationale or evidence-base for such changes?
    - What are the contextual factors that necessitate, support, or hinder such changes?
    - What are the current constraints and how will they be addressed?
    - What would the refinements be? Consider the financial and practical implications in making such refinements.

Key Lessons Learned

1. There are natural tensions in a research-practice partnership.
2. Planning matters.
3. What you don't do is as important as what you do.
4. Data helps you work smarter.
5. It is important to create strategic plans, and to stick with them.
6. The curriculum needs to keep pace with the students.
7. Use NAEYC accreditation as a driver to set quality at the school level.
8. Whether degrees are critical for education workers is a fraught issue.
9. Creating a pre-K model for community-based programs is crucial.

2. How would such changes be implemented? How can research support these refinement efforts?

    - What research questions could inform continuous quality improvement efforts to support these refinement efforts?

3. What is the appropriate timing for developing research questions given the potential for new implementation of program or system changes?

Afterward, share and compare the responses across groups. How are they similar or unique? Are there common themes?

2. Building research partnerships to support data-driven, evidence-based quality improvement efforts. An element of the success of BPS is Sachs's long-term relationship and articulated understanding with a research partner.

> **There are natural tensions in a research-practice partnership. Some questions are too academic in our department's view; that is, they might benefit the field but not the department. We turn down ideas that fall into this category if they represent a burden without benefit for the district. Conversely, sometimes the department has had a question or a "need to know" that is either not of interest to academics or not publishable. Weiland and her team have generally taken these on just the same. Their view is that to be good citizens and partners and to learn as much about the district as possible, it is important to address them.** (Sachs interview, 11/17/20)

The BPS Department of Early Childhood uses data for a variety of purposes, such as identifying systematic weaknesses across classrooms and targeting PD accordingly. For example, classroom quality data collected in 2010 in prekindergarten and kindergarten revealed that although the program had the highest instructional quality of any large-scale prekindergarten to date (Weiland, Ulvestad, Sachs, & Yoshikawa, 2013), teachers were not doing enough to support children's conceptual development. Professional development was then modified to target best practices in this area. We also created a teacher-friendly template that displayed each teacher's results compared to district averages and areas for growth. Coaches worked with teachers to help them understand the implications of their scores for their practices (p. 161).

I've learned to be a manager and how to connect people's work to a strategic plan and help them see the connection. We've stayed with it for a long time so we could collect and use data to adjust as needed. It is the process of doing the work with a strategic plan and goals over time that lets us evolve… People need to learn management, strategic thinking, benchmarking skills. I have always had partnerships with people in different fields. (Sachs interview, 11/17/2020)

Activity

Implementation research makes clear the need to build practitioner, researcher, and policymaker partnerships to implement evidence-based, informed practice. This effort requires genuine collaboration throughout all the phases of implementation research. Research partnerships can be formal in nature according to various research-practice partnership (RPP) models, or they can be informal.

For many practitioners, joining as a partner in research requires self-inquiry to become aware of themselves as consumers of research (or not) and of their assumptions about research that they may not even be aware they hold.

In small groups, examine your perspectives about and experiences with research and develop a self-inquiry questionnaire for colleagues who may one day, like Sachs and his colleagues, have the opportunity to initiate or partner in a research study. Work together to include questions that promote self-reflection in addition to questions that define genuine collaborations with other stakeholders, including policymakers and families. Identify roles and responsibilities for partners as they collaboratively develop research questions and study designs, gather and synthesize data, and disseminate results that include questions still be to answered.

As you develop this tool, keep in mind how genuine collaboration is an integral part of implementation research and is required to identify questions and results that are meaningful to early educators and applicable to their daily practice with young children and families. While creating this professional development resource to help educators see the vital role they play in conducting effective implementation research in the field, imagine that you will be asked to present it to colleagues and persuade them that their participation is necessary.

In addition, consider the following background questions:

1. Describe the value of research in informing practice (refer to BPS or to Chapter 5). What additional research questions remain about the implementation and effectiveness of the BPS early childhood program?

2. What are potential obstacles to early educators staying abreast of research, integrating research findings into their practice, and seeing themselves as potential collaborators?

    - What are strategies to overcoming these obstacles in instances where they exist?

3. Focus on the issue of "translation" and what is needed for early educators and researchers to understand one another.

    - Choose examples of "researchers' language" from the BPS case study or Chapter 5 and translate as needed so that the content is meaningful and applicable for an early educator.

    - Choose three examples of "early childhood-speak" and translate as needed for a researcher. What difficulties do you imagine researchers and early educators experience while doing this translation?

    - How can you, as a practitioner, assist the researchers in their efforts to translate?

    - How do you imagine these translations differ as researchers communicate with policymakers?

4. What do ECE stakeholders, including early educators, program leaders, and policymakers, need to understand about each other's culture and practice to collaborate effectively in order to understand program implementation and examine program effectiveness?

    - What does each of these stakeholders need to understand about children and their families to understand program implementation and examine program effectiveness?

    - How are the perspectives of partners (e.g., early educators, program leaders, and policymakers) similar or distinct?

    - What are the similarities and differences between what each brings to the table in terms of their background knowledge and experiences?

    - How might their specific goals, methods, and challenges be similar or distinct?

- How might such perspective-taking help build collaborative research partnerships?

5. What should early educators know and be able to do as partners to support solid ECE implementation research as they collaborate with researchers and policymakers? Think in terms of content knowledge and familiarity with research, ability to work with researchers and policymakers, and the personality traits that could and could not make that successful.

    - How can you, as a practitioner, make sure that you start your career prepared to be a collaborative partner?
    - How can you ensure that you remain a good collaborative partner over the years?
    - How can practitioners encourage their colleagues to keep up with current research as an integral part of quality care for all young children?
    - How can administrators communicate the importance of this task to their staff?
    - How can professional development be used as a tool to do this?

6. How would you explain to ECE educators and policymakers how research findings can be disseminated to be easily accessible, understood, and applied?

7. Share and compare your collaboration self-inquiry resources and responses to the associated questions across small groups. How are they similar or unique? Are there common themes?

3. Addressing the need for tools. As Sachs notes in Chapter 7: The lion's share of our PD focuses on first setting the table—getting teachers to understand their curriculum and the "whys" underneath it, and then getting them to reflect about whom they are teaching and how to differentiate their instruction. ***Though we focus on curriculum fidelity, we view it as "a tool, not a rule."*** We know that strong teachers will need to make adjustments along the way to meet the diverse needs of their classrooms. The rub is getting them to make choices based on what facilitates learning versus what is easier to manage (p. 159).

> **Researchers and policymakers need to help define student outcomes and what teachers should do. We need tools with specificity that take a fine-grain look at what happens between teachers and kids. To look at what works for which cultures, which languages, which income level and tools that let us see how income and culture interact. We don't have these measures and we need them urgently… The best thing we did was to create a curriculum and fidelity tool and then we could celebrate and acknowledge what good instruction looks like.** (Sachs interview, 11/17/2020)

We have tried a variety of coaching models, with ratios as low as one coach to eight teachers and as high as one coach per 20, which was more of a grade-level team focus. *What we have learned is that coaching is most effective when the teacher wants to change and that the strategies we use need to be differentiated based on a teacher's knowledge level and how committed the school or program is to change* (p. 158).

> **We are interested in getting teachers to ask questions about big things such as, "What are necessary spaces?" so they can work together to talk about children's work and to reflect on children's thinking.** (Sachs interview, 11/17/2020)

Activity

Fidelity tools are often used when examining the implementation of a program to assess how closely the delivery of the program aligns with the intended model and purpose. This exercise is intended to further your thinking about how to measure if program implementation matches the original program model and design.

In small groups, choose a curriculum used by an ECE program in your local context, or a curriculum that you are familiar with, and design a fidelity measure/tool to provide "a fine-grain look" at what happens between early educators and their students in a classroom or a home-based setting. Consider the following questions:

1. Explain the importance of a fidelity tool in measuring the curriculum you chose. In what context will this tool be used? Think about the ECE setting; geographic location; funding streams; racial, ethnic, and linguistic breakdown of the children served; racial, ethnic, and linguistic breakdown of the workforce, etc.

- Should families be involved in the construction of this evaluative tool? Why or why not?
- How might this be done in practice?

2. What research questions will the fidelity tool address?
3. What dimensions of curriculum implementation and instructional practice will the fidelity tool measure?
4. What elements of practitioner-child interactions, instructional content, or children's learning will be evaluated to assess fidelity?
    - What types of data will be collected and what measures will be used? Why did you choose these?
    - What opportunities and what roadblocks might be encountered?
5. How will the tool support instructional practice responsive to the various subgroups of children attending the program?
6. Why is it important to measure the reliability and validity of the tool?
7. How much administrative demand and time will it take for this evaluation to be completed?
    - Who will be involved in documentation and observation?
    - Should practitioners be involved in the completion of this evaluation? If so, how?
8. How will the tool be used by coaches to support instructional practice in the classroom and home-based settings?
9. How will the tool be used by practitioners to inform their own practice?
10. In what ways will the information collected be valuable to stakeholders? Be specific about different types of stakeholders.

Share and compare the various fidelity tools across the small groups. How are they similar or unique? Are there common themes?

SECTION 3

HOW DO WE GET SMARTER? THE ROAD FORWARD

IN SECTION 3:

SECTION 3, CHAPTER 8

AN OVERVIEW OF IMPLEMENTATION RESEARCH AND FRAMEWORKS IN EARLY CARE AND EDUCATION RESEARCH

JoAnn Hsueh, Ph.D., MDRC
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Michelle Maier, Ph.D., MDRC

***An Overview of Implementation Research and Frameworks in Early Care and Education Research* introduces implementation science principles specific to researching the effectiveness of early care and education (ECE) programming. Authors JoAnn Hsueh, Tamara Halle, and Michelle Maier outline principles and frameworks from implementation science that undergird implementation research and point readers to additional volume chapters explaining how implementation research can be used to improve the scaling of ECE programs across different settings and contexts**.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

> **With frameworks, we are trying to illuminate areas where research hasn't focused. For example, how was a program designed? How is it being delivered? Is it reaching the intended population? In the literature, we often take a focused, myopic view of what makes a program effective, and we don't pay attention to the broad constructs about how the program is being delivered and the contexts and circumstances that can also shape whether the program is effective. An implementation framework can help assure you have sufficient information to know what makes a program you are developing or scaling effective or not.** (Hsueh interview, 10/13/20)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. Defining implementation research. Implementation research encompasses the application of implementation science frameworks and principles to systematic inquiry into the act of carrying out a program, as well as how a program is received and experienced in real-world settings and situations. In its most basic form, implementation research and analysis aim to illuminate what is happening, how it is happening, who is making it happen, why a program achieves the outcomes that it does, and for whom it works best. Implementation research can take a vertical perspective, looking at how processes across different levels of the supporting system can work in synergistic or countervailing ways to support a program's implementation, or it can take a horizontal perspective, examining how implementation unfolds across a range of different settings, contexts, and populations (Ryan, Ch. 11; Vavrus & Bartlett, 2006) (p. 181).

Implementation frameworks serve as organizing tools that help highlight underexplored areas and point to ways to improve ECE program effectiveness for narrowing achievement gaps. By embedding the study of ECE programs within these frameworks, we can begin to broaden our knowledge of the influences that shape the lives and trajectories of young children with racial, ethnic, and immigrant minority backgrounds and who experience poverty (p. 189).

As Hseuh explains, "There's not a lot of familiarity about implementation frameworks in ECE. We want people to consider their research and operational implications as we try to illuminate areas where research hasn't focused. For example: How was a program or initiative designed? How is it being delivered? Is it reaching the intended population? For whom is the program impactful?

This chapter may make it feel like you have to capture everything (in your research design), but the point of a framework is to plant seeds of where you can look. Where you can look critically at the literature about what evidence is known. Where you can focus on measurement, strategies, and your design using elements of the framework."

Discussion Questions

All programs are collecting information, but often it is limited to a small set of indicators. For example, how many kids attend? Do they attend regularly? Implementation research can point towards taking a more holistic approach. It is not just dosage of how many times someone attends, but it is about what do they get when they do come. What is their experience when they are there? How does that compare to a different program that may be out there, too? (Hseuh interview, 10/13/20)

1. How can implementation frameworks serve as organizing tools to support practitioners, researchers, and policymakers in collaborating to identify a research question, develop a research design, collect data, and evaluate and communicate findings?
2. From an on-the-ground perspective, what areas of inquiry are most critical for ECE implementation research to examine and for what purpose(s)?
    - What research partners are needed, why, and how would their contributions differ?
    - What information needs to be collected?
    - How might this information contribute to the goal of offering high-quality early education to all children?
3. What are the benefits and challenges in collaborations between practitioners, researchers, policymakers, and families to study how a program is delivered?
    - How might some of the challenges be addressed?

4. What suggestions do you have for researchers to help them communicate findings in a way that makes them accessible, understandable, and applicable to an early educator's program and daily practice?
    - How would you prefer to receive research? In what form and format?
    - How do decisions around the dissemination of research impact if and how it is applied by early educators? Why do you think so?
    - How do you stay informed about recent research?
    - What systems need to be in place to make it easier to learn about research findings relevant to your work?

2. Adopting an inward or outward focus on implementation. Implementation frameworks underscore where research can focus and, in turn, generate hypotheses and research questions. A growing set of implementation frameworks have been applied to ECE; one kind focuses inward on program components and structure, and another focuses outward on the contexts and larger infrastructure that support successful implementation of programs and systems. Implementation researchers differ in their perspectives of what constitutes an inward or an outward focus. Indeed, these distinctions can shift with a researcher's focus of inquiry. For the purposes of this chapter, implementation research that focuses inward addresses a program's theory of change or implementation processes, while implementation research that focuses outward is oriented to the larger context and infrastructure supports that surround a program. These foci highlight potential sources of variation that may account for the effectiveness (or lack thereof) of ECE programs, as well as for how such programs may have varying effects in different contexts and for children with different backgrounds and experiences (p. 182).

> **When we want to influence policy and practice, looking outside the program to the larger context and infrastructure of supports around a program is key to answering the questions: Are beneficial services being delivered that children (and families) aren't getting elsewhere? What is the value-add of this particular program? Many folks say, "Here's the program we designed, and here's its impact." But without taking into consideration the surrounding context and critical supports and infrastructure that were in place to create the effective program, the field has very little information to guide replication of its effects or scaling in other contexts and situations.** (Hseuh interview, 10/13/20)

Discussion Questions

1. Consider the different backgrounds and experiences of children and families in a community and in an ECE program with which you are familiar. How can you learn more about these children, families, and their community?
    - How do their lives shape local programs and settings?
    - How might the lives of children, families, and practitioners within a given context influence practitioners' instructional practice?
    - What do you see as the link between understanding children, families, and their community and providing high-quality ECE services?
2. What services and opportunities might be available or offered to children and families in the community outside of their ECE program?
    - How can you learn about these services and opportunities?
    - Why is it important to gather data on these services and opportunities for practitioners, children, and families?
    - What do you want to know more about? Why?
    - What implications does community context have on the research questions and for the choices being made about who is included on a research team?
    - How does context potentially influence program design and expectations?
3. What are some examples of internal and external conditions that might influence children's outcomes in ECE programs and can affect program quality across contexts and at scale?
    - Are any of these factors more or less salient than others?
    - How can identifying, articulating, and understanding the possible impact(s) of these variables help promote quality across the ECE field and for individual children?
    - What information would be most helpful in strengthening program infrastructure, policies, and practice?

- What are examples of research questions that might require a more inward focus on implementation?
- What are examples of research questions that might require a more outward focus on implementation?

3. Focusing on stages of the implementation process. The National Implementation Research Network, for instance, identifies four implementation stages: exploration, installation, initial implementation, and full implementation (Bertram, Blase, & Fixsen, 2015[1]) (p. 186).

During ***exploration***, stakeholders are assessing their needs and identifying what will best fit those needs in terms of adopting new programs, policies, or practices. They are also examining the feasibility of taking on a new practice, program, or policy, including assessing buy-in by all those affected by such a decision. During ***installation***, the new program is not yet being delivered, but stakeholders are busy making sure that they have the technical, financial, and human resources to carry it out. This may involve hiring and training new staff or training existing staff (i.e., addressing staff competencies) or making structural and instrumental changes organizationally (i.e., addressing organizational infrastructure) that enable stakeholders to carry out the new program. Initial implementation signals the start of service delivery. During this stage, data are regularly gathered and used to assess how well things are going and to adjust as necessary, with the goal of continuously improving implementation. Rapid-cycle problem solving becomes prominent during this stage and continues even when full implementation is achieved. ***Full implementation*** is characterized by skillful implementation of the new program, with the necessary skilled practitioners, organizational infrastructure, and leadership in place to support its continued reliable use and sustainability.[2] While these stages are presented here in a sequential, linear order, there is consensus in the field of implementation science that the stages are recursive (Saldana, 2014[3]), and that achieving full implementation of a well-defined evidence-based program can take between two and four years (Bierman et al., 2002[4]; Fixsen, Blase, Timbers, & Wolf, 2001[5]) (p. 186–187).

Often because research happens at a point in time, we assume the program, and ensuing findings, are static. But the program and the context supporting the program are always changing. For example, the population, economy, staff, and program evolve over time. As a program develops services, its theory of change may get more defined over time. If the program shows some success, it may gain new funding and serve new children, expand, and have satellite locations where it can reach more children. Every time a program expands, it comes into a new context. New staff may be hired. There is a dynamic interplay as both context and the program itself change. It requires a shift from seeing research as "a snapshot" to seeing it as "a process over time." When data collection is embedded into a program's daily life, there will always be a source of information about these dimensions. (Hsueh interview, 10/13/20)

Discussion Questions

1. Consider how programs and instructional practices within programs may differ across various stages of implementation. What are examples of changes you may have experienced or expect to experience?

    - How are the implementation stages tied to program development?
    - How might such changes affect your expectations for program and child outcomes during each stage?
    - What research questions might be asked to better understand these changes?
    - How might the research questions about instructional practice differ as one moves through the different implementation stages?
    - How might the data being gathered differ through each stage?

Moving forward.

"Any advancement you can make advances the field as a whole. It is the findings of many studies that will move the field forward by looking outside traditional research. People think, "my dissertation has to be the be-all, end-all." Move in the direction of drawing upon implementation research paradigms and principles but focus on a subset. Balance the practical and the grander vision in your research. You are part of a movement that is bigger than yourself. You have something to contribute." (Hsueh interview, 10/13/20)

Discussion Questions

1. How do Hsueh's insights inform your perspective on research and researchers?
2. What is Hsueh referring to when she says, "outside traditional research"?
3. How might early educators contribute to moving the research field forward?
4. What is an ECE implementation question that you think should be studied?
    - In practice, does this question receive much attention? Why or why not?

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[1] Bertram, R. M., Blase, K. A., & Fixsen, D. L. (2015). Improving programs and outcomes: Implementation frameworks and organization change. *Research on Social Work Practice, 25*(4), 477-487.

[2] Some implementation science researchers identify *Sustainability* as a distinct, fifth stage or phase of implementation (Saldana, 2014). Similarly, a well-established implementation framework in health science research, RE-AIM, identifies *Maintenance* as the final component of implementation (Damschroder et al., 2009).

[3] Saldana, L. (2014). The stages of implementation completion for evidence-based practice: Protocol for a mixed methods study. *Implementation Science*, 9(43). https://implementationscience.biomedcentral.com/track/pdf/10.1186/1748-5908-9-43

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SECTION 3, CHAPTER 9

DESIGNING IMPLEMENTATION RESEARCH TO GUIDE THE SCALE-UP OF EFFECTIVE EARLY CARE AND EDUCATION ACROSS SETTINGS

Michelle Maier, Ph.D., MDRC
JoAnn Hsueh, Ph.D., MDRC

In *Designing Implementation Research to Guide the Scale-Up of Effective Early Care and Education Across Settings,* researchers Michelle Maier and JoAnn Hsueh call for concerted efforts to design and enhance implementation research to better understand variation in implementation and program impacts from multiple and holistic perspectives. Expanding the scope of early care and education (ECE) to scale implementation research helps to ensure findings can be used to guide policy and practice as well as determine how best to support and sustain effective programming to reach a broad number of children and close disparities in achievement.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

> **Our chapter is a call to researchers and practitioners to become more intentional in asking and answering questions, including: What are the goals? What has been put in place to meet those goals? What happens? What might be getting in the way? Answers to these questions are needed to inform adaptations or improvements that will help determine and strengthen outcomes.** (Maier interview, 11/6/20)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. Well-designed implementation research is the key link between small-scale early care and early childhood education (ECE) programs that have been proven to work and large-scale adaptations across populations and settings.

Waiting years to see whether programs work provides too little information too late. Ongoing, well-designed implementation research, however, can provide real-time feedback on necessary program adjustments, identify the supports needed to successfully put these programs into action in varied localities and contexts (Martinez-Beck, 2016), and address why and how a program works and under what circumstances. Such research gives the field the information it needs to bring promising programs to wider populations, enabling all children to have access to high-quality learning experiences (Phillips et al., 2017) (p. 197).

The goal is to try to implement with fidelity. Folks in the field question whether how programs unfold naturally is sufficient to generate positive impacts but may not be taking an active stance to collect ongoing data to empirically investigate and understand how things are going. We need to consider ways to formalize data collection in doable ways. (Maier interview, 11/6/20)

What is tough is that there often isn't a strong theory of change, or core components are not clearly articulated by developers of a program. Pulling that apart is critical to setting the foundation of where to start in collecting data. Implementation research is a call to take a step back—to think about what you are doing and why. Taking the time to do this is going to shape the program, the research, and determine and enhance outcomes. (Maier interview, 11/6/20)

Discussion Questions

1 . How can the context that an ECE program or intervention is situated in change during various stages of program implementation and scale-up?

- How might these evolving contextual factors influence the attainment of the planned program goals and goals for child outcomes specifically?

2. How can contextual information about a program learned through implementation research help the various research partners replicate programs and specific practices?

- Are there any specific contextual factors that you think are more salient than others when it comes to program replication?
- Hypothesize your own theory of change, with the goal of supporting an ECE program model to generate positive impacts.
- What are some specific examples of positive program or child outcomes that could be a part of this theory?
- What specific factors or practices (mediators) led to these outcomes?
- Draw your own conceptual framework for research examining variation in program effects (Figure 1, p. 198) using your responses to these questions.
- Did drafting your own conceptual framework bring to light any knowledge gaps that need to be researched to create positive outcomes for children?

2. Implementation frameworks guide the focus of research. This framework highlights where sources of variation may be likely to influence program effects and, therefore, underscores where research can focus. This includes operationalizing and measuring (p. 199):

- *fidelity of implementation of the program and implementation plan;*
- *proximal sources of variation in program effects such as treatment contrast, participant characteristics, and program context;*
- *distal sources of variation such as characteristics of the implementing organization and of the larger system; and*
- *potential moderators of these relationships.*

No one study needs to or can capture all of the elements in this framework. The point of this framework is to plant seeds of areas to study, to illuminate areas where research hasn't focused. It is the findings of many implementation studies that will move the field forward. (Hsueh interview, 10/13/20)

Discussion Questions

1. What questions do you have about the conceptual framework depicted in Chapter 8?
    - What questions do you have about how program effects might vary across different program contexts and participant populations?
    - How might the framework help answer research questions you may have about what works or doesn't work, for whom, and under what conditions?
2. In what ways could the "program planned" be similar to or very different from the "program received"?
    - What factors might play a role in the alignment or misalignment between the two?
3. Think about specific practices within the implementation process. What do you think might be some of the benefits and challenges in maintaining fidelity to program models in application?
4. Based on your experiences in and knowledge of ECE, what sources of variation are more or less influential on programs and child outcomes at various stages of implementation?

3. Creating an evidence-building cycle. Embedded in each of these stages of program development are three aspects of evidence-building research (Knox, Hill, & Berlin, 2018; Metz et al., 2016):

- ***implementation*** *of the program model, which is continually in flux and evolving at each stage of program development;*
- ***adaptation*** *of and adjustment and improvement to the defined program model, organizational and system supports, and infrastructure; and*
- ***building*** *impact evidence by testing the program model.*

In essence, these evidence-building activities have a cyclical relationship; iterative feedback loops aim to strengthen the model as the circumstances, context, and environment in which the program is being delivered evolve, which in turn can help the program operate successfully at each new stage of program development (Knox et al., 2018).

ECE can benefit by aligning implementation research designs and measurement to this evidence-building cycle and stages of program development. As Manno and Miller Gaubert (2016) argue, (a) many implementation research topics and questions are relevant across stages, but depending on whether a program is undertaking horizontal or vertical scale-up, the specific research questions and their emphasis will be slightly different; and (b) even in early stages of program development, implementation research can lay important groundwork for informing future scale-up (p. 200).

The authors illuminate potential areas of study within implementation research, including:

- *Treatment planned, offered, and received*
- *Implementation plan and system supports*
- *Characteristics of participants*
- *Characteristics of organizations implementing the program*
- *Institutional and contextual factors external to an organization*
- *Strength of service contrast resulting from the program*

Being intentional—knowing what you are putting into place, what the goals are behind that, are you reaching your goals, and what might be the way of doing that—can help inform adaptations and improvements to achieve our goals: strong outcomes for all children. (Maier interview, 11/6/20)

Discussion Questions

1. In the vertical scaling of a program, what are some common institutional or contextual differences that may arise in program implementation that could affect program quality, instructional quality, and/or child outcomes?

    - Choose one of these factors and formulate a research question to investigate the impact of potential differences.
    - Why does understanding these contextual factors matter for the vertical and horizontal scaling of programs?
    - How might such investigations identify factors that contribute to the root causes of inequity?
    - What deeper research questions could result from these investigations into the root causes of inequity?
    - What could this reveal about ways to eliminate disparities?
    - What further research questions could be asked?

2. Consider the three aspects of evidence-building research listed above and in the chapter. What difficulties might program administration and staff face that are unique to each of these stages?

    - Assume you are collaborating with a researcher on program development as you move through these stages of evidence-building research. How might you communicate to the researcher the challenges that you are facing as either an administrator or a staff member. How might you collaborate with the researcher on alleviating some of those challenges?

3. Looking at the inward and outward focuses for implementation research in real-life contexts, is there an end to an evidence-building cycle? Why or why not?

4. Potential methodological approaches to implementation research. Implementation studies can take multiple forms, using quantitative, qualitative, or mixed-method approaches. Quantitative efforts tend to be more objective, closed-ended, and numerical in nature; use statistical analysis; and commonly rely on methods like surveys, direct assessments, structured observations, and administrative data. Qualitative efforts tend to be more exploratory, subjective, and open-ended in nature and typically rely on one-on-one interviews or focus groups (conducted at a single time point or multiple time points), ethnographies, document reviews, unstructured or semi-structured observation, and case studies, among others. Mixed-method approaches combine these two types of methods (p. 201).

We had tested Building Blocks, a math curriculum, and then folks we trained to be coaches for this evaluation moved over to the New York City Department of Education to put this curriculum in place. How to track implementation? Coaches filled out a log. At one point a coach said to me, "You forced me to learn about and do this log. I never understood why. I now understand that if I have 80 coaches doing this, there needs to be a mechanism to track fidelity." This is an example of real research in the real world. (Maier interview, 11/6/20)

Barriers in implementation research are often small and prevent human beings from doing things. For example, boxes in a journal may be too little to write in or not having a printer to print out materials. Researchers have to learn what will work from people on the ground. (Maier interview, 11/6/20)

Discussion Questions

1. What unique contributions can each research approach (e.g., quantitative, qualitative, and mixed method) make in understanding how, why, and for whom a policy, program, or practice does or does not work?

    - Think about different research questions you might ask that would require a qualitative approach, a quantitative approach, and a mixed-method approach. Provide a few examples of each, along with explanations as to why those research questions align with that specific approach.

2. Maier lists writing space and printing issues as "small barriers" to carrying out implementation research in the real world. What other small barriers might you imagine? Consider the different barriers researchers conducting the research and practitioners participating in the research might encounter.

    - What steps can be taken to prevent or adjust as needed to remove or mitigate such barriers, especially given the limited funding that research typically has?

Moving forward.

Maier says that practitioners and researchers often get so busy that they don't take or have the time to pause and think about what they are doing and why, but doing so is key to getting it right.

1. How might taking the time to think about an approach or instructional strategy enhance your professional effectiveness?
2. How can practitioners create more time in their practice to think about these things?

    - What practical steps can be taken to ensure that this is accomplished?
    - What practical steps can be taken so that practitioners have the opportunity to collaborate and discuss these ideas with colleagues on an ongoing basis?

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SECTION 3, CHAPTER 10

HOW IMPLEMENTATION SCIENCE AND IMPROVEMENT SCIENCE CAN WORK TOGETHER TO IMPROVE EARLY CARE AND EDUCATION

Tamara G. Halle, Ph.D., Child Trends

In *How Implementation Science and Improvement Science Can Work Together to Improve Early Care and Education*, Tamara G. Halle explains the value of two frameworks to advance effective implementation and quality improvement in early childhood programs, policies, and practices. Despite nuanced differences between these approaches, they share enough similarities that they can be easily combined to support and promote evidence-based early childhood programs and systems by identifying what works in different contexts and conditions while providing insights for continuous improvement.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

> **The bottom line is that what these frameworks are doing is organizing and helping stakeholders—including researchers, practitioners, and policymakers—to articulate and consider together what works, for whom, and under what conditions. Together they can help us see what we know and what we still need to know in order to effectively implement and improve services to children and families.**
> (Halle interview, 11/13/20)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. Implementation science is the systematic inquiry into the processes by which interventions are enacted in the real world. It examines not only the interventions themselves but also the contextual factors and organizational supports that are necessary to create a hospitable environment for enacted interventions to achieve their intended outcomes (Century & Cassata, 2016; Damschroder et al., 2009; Granger, Pokorney, & Taft, 2016; Martinez-Beck, 2013; Peters et al., 2013; Peters, Tran, & Adam, 2013). It typically focuses on the implementation of an evidence-based program or practice. Consequently, implementation science, like some program evaluations, is interested in intervention fidelity, that is, the extent to which the intervention was actually delivered "as designed" and intended (Hulleman, Rimm-Kaufman, & Abry, 2013) (p. 227).

Improvement science involves a systematic examination of the methods and contextual factors that best facilitate quality improvement at the individual, program, and/or system level (Health Foundation, 2011; Langley et al., 2009; Shojania & Grimshaw, 2005). Improvement science draws heavily on process improvement models from business and manufacturing (Deming, 1986) and on organizational change management theory (Cameron & Green, 2009), as well as implementation science (Durlak & DuPre, 2008; Fixsen, Naoom, Blase, Friedman & Wallace, 2005; Meyers, Durlak, & Wandersman, 2012). Improvement science originated in manufacturing as the systematic study of the series of steps and activities that make up a work process, with the aim of improving the quantity and/or quality

of the work product and reducing costs. The inclusion of systems thinking and change management perspectives led to the study of how workers think together about improving their activities as a team. Improvement science strongly emphasizes the expertise of practitioners and their role as "active inquirers" who develop practice-based evidence (Bryk, 2015) (p. 227–228).

What, then, distinguishes these frameworks? The distinctions are subtle. Implementation science tends to focus on the conditions that support fidelity to evidence-based or evidence-informed practices as a means to achieve the intended outcomes of an intervention, whereas improvement science does not (see Table 1). Rather, improvement science tends to focus on innovation and adaptation based on evidence-based practices as a means to achieve improved outcomes. However, implementation science also acknowledges and tests adaptations and is interested in improved outcomes, not just fidelity and intended outcomes (Century & Cassata, 2016) (p. 229). See Table 1.

These frameworks came from very different disciplines—business and manufacturing and health care. They are helpful and can help us improve services to children and families. (Halle interview, 11/13/20)

Discussion Questions

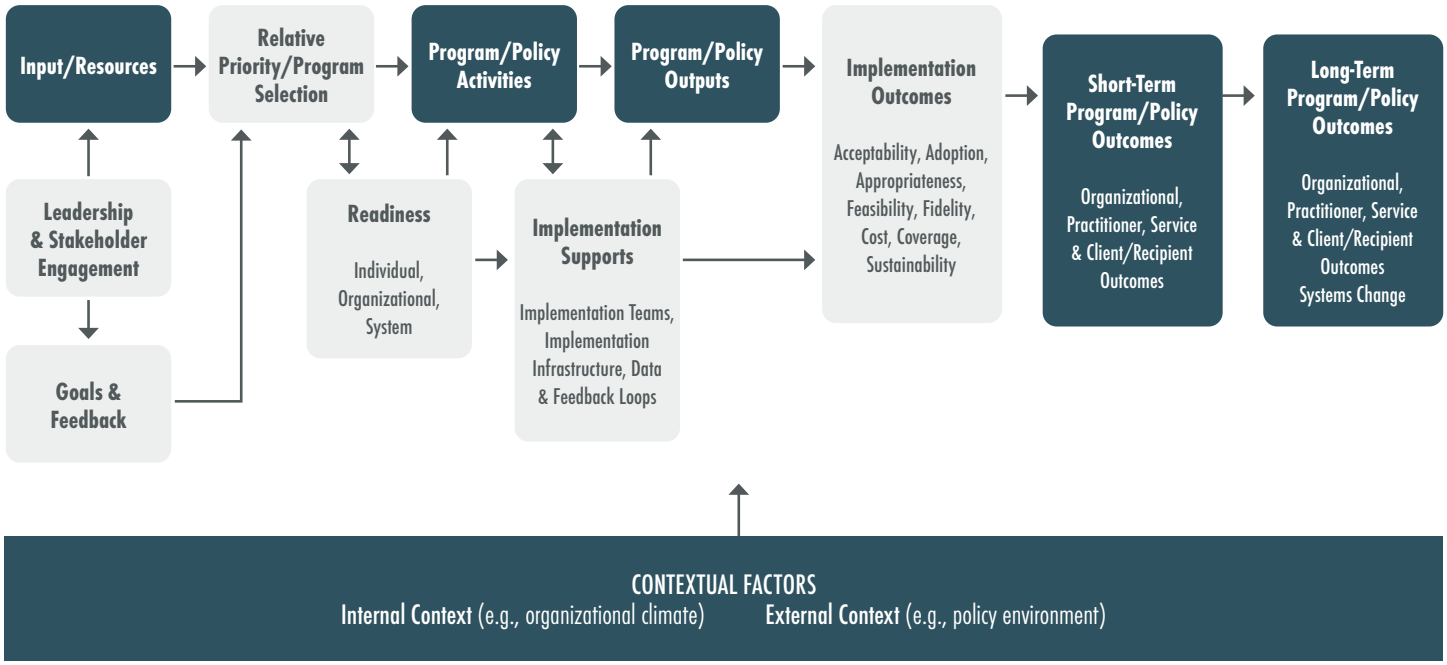
1. Why do you think implementation science and improvement science are being brought to bear at this time to support the work of the early childhood education (ECE) field to achieve positive outcomes for children, especially those from low-income backgrounds?
    - What are the implications for administrators, practitioners, and children of an emphasis on innovation and adaptation of practice to fit the current context rather than fidelity to set program standards?
2. In what ways can implementation science and improvement science approaches contribute to moving the ECE field forward?
    - How can each separately contribute to moving the ECE field forward?
    - What are the implications for practice in recognizing that evidence-based practices may need to be adapted to work in different contexts or for different individuals in new settings?
    - What is an example of how an evidence-based practice might be adapted?

- What steps can be taken to ensure the adapted practice is effective?

3. Identify a research question about program evaluation and effectiveness that you are curious about. Is the question more geared toward an implementation science approach or an improvement science approach?

    - What considerations led you to that particular question?
    - How will investigating this question allow you to improve in your work?

2. Conceptual model incorporating implementation elements into traditional program and policy evaluations. Figure 1. (p. 233)



Note: Incorporates concepts from Bauer et al. (2015), Brennan et al. (2013), Damschroder et al. (2009), Metz et al. (2015), and Proctor et al. (2011).

Figure 1. It says to researchers: *"Paying attention to and finding measures that let you look at supports are important factors to capture in your evaluation. What the field needs is better measures of implementation supports. We need more validated measures in particular; but for now, we need to collect information about implementation supports qualitatively if not quantitatively in our program and policy evaluations. This will help us tell the story of what works, for whom, and under what conditions. And we need to write about these measures and findings in our research reports and journal articles. The more we share this in our reports, the more we will be able to build the field."* (Halle interview, 11/13/20)

Figure 1. It says to practitioners: *"Everyone is a stakeholder, everyone a leader, everyone a researcher. That is the ideal. To create a hospitable environment to sustain continuous quality improvement and to sustain best practices with the goal of achieving the desired, improved outcomes. This has to do with attitudes and mindset and with programmatic support and organizational structures. Examples of such programmatic support include time for staff to meet and talk about what is working for them; using staff meetings to talk about what works; and modeling data use in decision-making to test whether something is leading to improvements in practice."* (Halle interview, 11/13/20)

Discussion Questions:

1. How does knowing about a program's resources and supports help with understanding program implementation, especially in determining what works, for whom, and under what conditions?
    - How might having that same understanding assist a researcher as they work to carry out their research study?
2. What do you see as the impact of emphasizing the expertise of policymakers and their role as "decision makers" in creating systems and allocating resources that support programs and practice?
3. What do you see as the impact of emphasizing the expertise of practitioners and their roles as "leaders" and "active inquirers" who develop practice-based evidence in moving the field forward?
4. What are the benefits of a feedback loop for ECE implementation teams?
5. How can feedback loops help communicate research findings within the ECE field?
    - How can they help with the goal of developing practical applications?

3. Research and evaluation design: home visiting as a real-world example.

Implementation science and improvement science argue for more practical and nimbler program development and for evaluation designs that can uncover the critical ingredients leading to successful implementation of early childhood interventions. Though some of these research design elements can be embedded in randomized control trials (RCTs), other innovative evaluation designs allow researchers, policymakers, and program designers to test innovations, identify important variability (Bryk, 2015), and get relatively quick answers to questions about what works for whom and under what circumstances (p. 235).

As with most evaluations and continuous improvement efforts, asking the right questions and getting them answered produces better outcomes (p. 231).

Questions about data and feedback loops are related to another unique contribution of implementation science to program evaluation: the assessment of the existence, functioning, and quality of the implementation infrastructure to support an early childhood intervention model (p. 232).

Home visiting models have been the subject of many traditional program evaluations over the years. For example, the Home Visiting Evidence of Effectiveness (HomVEE) project, supported by the U.S. Department of Health and Human Services, recently reviewed the research evidence for 20 home visiting models (Sama-Miller et al., 2018). HomVEE includes evidence of effectiveness from well-designed, well-executed RCTs and quasi-experimental designs. Most evaluations of home visiting models measure participant outcomes targeted by the interventions, such as parenting practices, family functioning, child health and development, maternal health and mental health, child abuse and neglect, or maternal life course outcomes such as deferral of subsequent births (Gomby, Culross, & Behrman, 1999; Sama-Miller et al., 2018). As models have matured, longer-term outcomes have been monitored, such as reductions in juvenile delinquency, family violence, crime, and family economic self-sufficiency (Sama-Miller et al., 2018) (p. 240).

The home visiting field has also embraced a focus on continuous quality improvement. In 2013, the Home Visiting Collaborative Improvement and Innovation Network (HV CoIIN) was established by the Health Resources and Services Administration (HRSA) to accelerate improvement among MIECHV grantees (p. 245).

The HV CoIIN was active from September 2013 through August 2017. It demonstrated improvements in home visitors' knowledge and skills in the topical areas, as well as an increase in the use of data to achieve improvements in the targeted outcomes. However, it did not achieve the ambitious levels of performance hoped for across all performance metrics. For example, the rates of exclusive breastfeeding at 3 and 6 months rose only 3% instead of the hoped-for 20%. Specifically, exclusive breastfeeding at 3 months rose from 10% at baseline to 13.5% at the end of the CoIIN, and exclusive breastfeeding at 6 months rose from 5% at baseline to 8% at the end of the CoIIN (Arbour, Mackrain, Fitzgerald, & Atwood, 2018).

Nevertheless, the HV CoIIN was deemed successful in demonstrating that home visiting outcomes could be improved through this QI method, and many tools and resources were created through the HV CoIIN that could help spread and scale up improvement efforts among MIECHV grantees, potentially even those that had not participated in the CoIIN. As a result, a second, 4-year HV CoIIN (called HV CoIIN 2.0) was initiated in September 2017. HV CoIIN 2.0 will engage 25 state and territory MIECHV awardees and 250 local home visiting agencies in quality improvement efforts around two topic areas that were addressed in the first CoIIN: (a) maternal depression screening, access to treatment, and symptom reduction, and (b) early detection of and linkage to services for developmental risk. In addition, the collaborative teams in HV CoIIN 2.0 will develop, test, and spread improvements in three new topical areas, the first of which is intimate partner violence.[20] Awardees will be selected in three waves. Each wave will last about 12 to 18 months and will once again use the Breakthrough Series Collaborative (BSC) framework for quality improvement.

In sum, although improvements in performance metrics have been modest, positive qualitative outcomes associated with improvement science frameworks have led to additional investments in home visiting quality improvement collaboratives. Methods that focus on changing organizational climate to support continuous improvement seem promising compared to other quality improvement approaches that take a more individualized approach, such as one-on-one coaching. Early childhood researchers await with much interest and anticipation further evidence on the spread and sustainability of QI methods within organizations that participate in a BSC or CoIIN, as well as achievement of target performance metrics for the content addressed by these quality improvement models (p. 248–249).

Early childhood professionals should feel empowered to think of themselves as researchers and to collect data to see if they are reaching their goals. Ideally, they should be intentional about making a change and gathering information about if that change resulted in improvement. This is how feedback loops should look—collecting data and feeding it back into practice and systems change. (Halle interview, 11/13/20)

Discussion Questions:

1. What do the studies on home visiting reveal about program implementation and, more specifically, implementation context?
    - How might these findings apply to your teaching practice, either in the past, present, or future? Think about a setting you are familiar with or a setting in which you hope to be employed in the future, and how that particular setting will play a role.
2. Why is research a good tool to use to improve instructional practice?

3. What do you see as the best way to communicate research findings to practitioners for them to be integrated into instructional practice?

    - What support(s) will make it easier for practitioners to integrate these findings into their instructional practice?
    - As a practitioner, how might you communicate these needs to the people who can provide them?

4. Using what you have learned about implementation science and improvement science, choose a real-world example of either an intervention or a service delivery method (apart from home visiting), and design either an evaluation or a continuous quality improvement effort to strengthen your chosen program. Use the example of the research on home visiting at the end of Chapter 10 as a guide in terms of what to include (p. 242–249). Be sure to indicate which type of research design you are going to use (e.g., implementation science, improvement science, or both), and provide sufficient reasoning. Include the aims, research questions, and research methods that you are planning to use, along with the anticipated outcomes. Think about the following questions:

    - What are the overall aims of your research?
    - What are your specific research questions and why did you decide to ask them?
    - Who will participate on your research team, what role(s) will they play, and how will they collaborate?
    - What kind of data will you seek to collect and how will you do so? You can describe your data collection methods generally. If you are planning to use specific research tools, such as a measure of language acquisition, you do not need to research the specific tool that you will use.
    - Briefly describe the anticipated results and how those results could be used in this real-world setting to improve the program that you chose.

Moving forward.

For the next series of questions, think about the case study home visiting example (p. 242 and p. 245).

1. What are the lessons learned for the ECE field about the importance of implementation infrastructure and supports to influence practice?
    - What questions remain?
2. How might the implementation science studies described support continuous quality improvement?
    - How might improvement science studies support continuous quality improvement?
    - How might the more traditional program evaluations that preceded the two support continuous quality improvement?
3. How might insights and lessons learned from this case study, and that of BPS in Chapter 7, be shared throughout the field in ways that enhance the chances they can be applied by individuals and programs in their practice? Be specific about the language, formats, and communicators used.
    - Thinking about the different members of the ECE workforce, including administrators, coaches, practitioners, and teaching support staff, how might the preferred language, formats, and communicators differ among these groups?
    - How might they differ within groups?
    - How can researchers figure out and then cater to these differences?

SECTION 3, CHAPTER 11

THE CONTRIBUTIONS OF QUALITATIVE RESEARCH TO UNDERSTANDING IMPLEMENTATION OF EARLY CHILDHOOD POLICIES AND PROGRAMS

Sharon Ryan, Ed.D., Rutgers, The State University of New Jersey

In *The Contributions of Qualitative Research to Understanding Implementation of Early Childhood Policies and Programs,* Sharon Ryan argues that qualitative studies examining the implementation of early childhood programs can provide practical information to help policymakers and leaders understand why early childhood programs do or do not fulfill their promise. The early childhood field has assumed that with evidence of best practices, it is possible to scale up what works in one site to many programs. Yet, evidence-based practices are often transformed, adapted, or even ignored in local sites. Therefore, it is imperative to look across programs at a macro scale while also employing qualitative studies to go deeply into variations in context and implementation strategies. With more qualitative studies of implementation across multiple sites, it might be possible to identify which local adaptations make sense and which may unnecessarily undermine best practices for young children.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

> **This chapter tries to elevate the voice of practitioners through qualitative research. They are the ones who make a difference for children and families. We've been remiss as a field to not use mixed research method designs more often, even though we need both qualitative and quantitative research to answer basic questions about what works and what adaptations are needed if all young children are to benefit from best practice. These research approaches complement each other as long as they are rigorously done.** (Ryan interview, 11/5/20)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. More recently, implementation researchers have begun to theorize about implementation as enactment—a complicated network of relations that assumes the movement from innovation to practice is multidirectional, not just top down or bottom up, as well as deeply political

(Datnow, 2006; Honig, 2006). From this perspective, the implementation process is influenced and shaped by many agents (from children to policymakers) with varying levels of power and influence within educational settings that constitute a nexus of multiple policies at any one time. Researchers working from an enactment perspective look at the politics of innovation, and how a wide range of stakeholders working in various networks resist, transform, and implement policy depending on organizational ethos and resources, professional theories, and perceived need (Braun, Maguire, & Ball, 2010) (p. 262).

Many people conducting research in our field don't know what it is like to be in the classroom, to run a program, or to run a site. They are good researchers but have not had hands-on experience. Now there is a group of researchers trying to explain what it is like to be on the ground on the front lines and the challenge of implementing a program and policy program… We need to learn about the work with and from them. (Ryan interview, 11/3/20)

Discussion Questions

1. Think about the idea of "implementation as enactment" and what that means for researchers in terms of understanding the populations being studied. List all of the agents or groups of individuals that influence and shape policy and practice. Now list these individuals in terms of the amount of power and influence they have, with those having the most power at the top. Then list these individuals in terms of how much they are affected by these policies and practices, with those who are affected most at the top.

    - How are the lists similar and/or different?
    - What implications might this have for the creation and implementation of policy and practice?
    - What does this suggest about the importance of researchers in understanding the goals and lives of the individuals on these lists?
    - How can the individuals on this list, particularly practitioners, support researchers to understand context?

2. Think back to the different stages of program development and implementation described in Chapter 8. What are examples of how qualitative research can be used across the various stages of each? Why might qualitative research be a better choice than quantitative research in these specific examples?

3. How can practitioners support researchers in using qualitative and quantitative approaches to deepen their understanding of issues in the early childhood education (ECE) field and to fill in gaps in their research?

    - How might the level and type of support differ for qualitative as compared to quantitative approaches?

2. Qualitative or interpretive research is interested in how individuals construct their social worlds and how those worlds are mediated by context and culture (Glesne & Peshkin, 1992). Research from this perspective typically involves spending a lot of time in educational settings, observing and talking with participants to develop an understanding and interpretation of educational phenomena. Qualitative researchers interested in implementation therefore examine innovations in sites of practice, often observing what takes place in schools and early childhood settings; they also shadow key stakeholders (leaders, teachers, families, state-level policymakers, coaches, etc.) and question them about an innovation and the reasoning behind their approach to implementing it. Using both the mutual adaptation and the enactment perspective, this research tends to focus mostly on the implementation of various public policies guiding prekindergarten or preschool (p. 263).

> **Qualitative research can provide portraits of practice so you can imagine what it is like to be in that classroom setting, community, or what it is like to be that kid.** (Ryan interview, 11/3/20)

Discussion Questions

1. How does qualitative research work to fill in the gaps that are missed by quantitative research? How do these two types of research complement each other?
2. Provide some concrete examples of exactly how qualitative research can help to understand the following: leadership, organizational climate, contextual factors (e.g., setting, location, resource allocation, participant experience, and perspective), policy, and practice in application.
    - What concrete steps would the researchers have to take?
    - Who would they need to communicate with?
    - How could they do so and what types of data should they collect?
    - What types of questions should they ask?

3. When looking at effectiveness of ECE program implementation, is it especially important for qualitative research to examine relationships (or lack of) between prekindergarten (including infant, toddler, and preschool) and K-12 systems? Why or why not?

    - How might differences in philosophical and instructional goals between these two groups have an effect on research and in practice?
    - Consider what could be learned about fade-out when examining the relationship between these two groups. What implications might this have for policy and practice?

4. How might supporting a relationship between these two groups have an effect on equitable practices in ECE, particularly in ensuring strong outcomes for all children?

5. How can qualitative research be utilized to come up with an agreed-upon vision and understanding of a continuum of education for children birth to grade 12 to move the field forward?

    - As a future practitioner in your chosen age group, what would you want to communicate about philosophical and instructional goals? What do you think is lacking in these areas?
    - What would you want to communicate about fade-out?
    - From the perspective of a future practitioner in your chosen age group, how might you suggest using qualitative research to reduce fade-out?
    - What would you want to communicate about equity and ensuring strong outcomes for all children?
    - As a future practitioner in your chosen age group, what improvements do you think could be made in this area and how would you use qualitative research to do so?

3. Toward a quality implementation research agenda. Focusing on the implementation of early childhood programming in local sites of practice and on the perspectives of participants helps us understand whether and to what extent a policy is implemented as intended, makes it possible to see how policies and programs are shaped by context and local actors, and can help with theorizing change and improvements in practice. However, the research base is limited to a handful of studies, and few of these look at implementation across multiple sites, multiple states, or at all levels of the system. The research reviewed in this paper suggests three possible paths toward a more comprehensive, critical, and policy-capturing use of qualitative research to improve the implementation of high-quality early childhood education systems. These include moving beyond classrooms and school districts to investigate multiple levels of the early childhood system, focusing on multiple stakeholders in the early childhood system, and, finally, considering equity (p. 269).

There are times when, to understand implementation, you should start with rigorous qualitative work. My work calls for consideration of qualitative research to understand equity for teachers and kids… You have to hang out every day to understand the subtleties—the decisions that are made every day. (Ryan interview, 11/2/20)

Qualitative research can provide portraits of practice so you can imagine what it is like to be in that classroom, setting, community. Or what it is like to be that educator, that kid. You can gain a deeper understanding of issues like equity that can't be captured in numbers. Qualitative and quantitative research can complement and enhance each other as long as they are rigorously done. (Ryan interview, 11/3/20)

Discussion Questions

1. Ryan suggests three possible paths toward using qualitative research to improve the implementation of high-quality early childhood education systems. These include investigating multiple levels of the system, focusing on all stakeholders, and examining issues of equity. What is similar about these paths and what is different? Consider the goals of each path and the methods you intend to use to achieve each of them.

    - Do you think that across different research studies, each of these routes of inquiry can and should be conducted in the same order?
    - In what instances might it work better to conduct different lines of inquiry before others?

2. How can qualitative research capture social, economic, and political factors that might be influencing program or policy implementation?
    - Why is this so important?
3. Choose one wide-reaching ECE policy that you are familiar with. Utilizing qualitative data, provide examples of how social, economic, and political factors might influence this policy.
4. Pick a research question focused on ECE practice that you are interested in. Think about what a qualitative study in two very different communities seeking to answer that question might look like. How might the social, economic, and political factors in each of those contexts influence the research findings?
    - How might you use quantitative data to answer this same research question? What kinds of data on the social, economic, and political factors in each community would you still be able to collect? What would be missing?
    - What are the benefits of combining these two types of data for your specific research question, particularly in answering this question in two very different communities?

Moving forward.

"It is one thing to learn research methodology and another to think conceptually and be able to see where your work fits in the field... In our field, your approach depends on how you are mentored rather than taking a look at what the field needs. You are lucky if you study with a researcher who is flexible in using methods. You have to build your skill set and be open to different ideas, to taking some risks." (Ryan interview, 11/2/20)

1. What are the advantages and disadvantages of engaging in qualitative research for researchers and practitioners who are seeking to understand the daily lives of those who work and learn in the program within the context in which the program is situated?
    - How does an understanding of qualitative and quantitative research influence your relationship with researchers as a potential research partner?
    - Do you think this understanding has an impact on the way those involved in the study view the researchers and the research itself?
2. How might your responses to the questions in Sections 1, 2, and 3 above intentionally or unintentionally shape you as a research partner?

SECTION 3, CHAPTER 12

EQUITY AS A PERSPECTIVE FOR IMPLEMENTATION RESEARCH IN THE EARLY CHILDHOOD FIELD

Milagros Nores, Ph.D., National Institute for Early Education Research

In *Equity as a Perspective for Implementation Research in the Early Childhood Field*, Milagros Nores argues that addressing equity in implementation research is important to shape early childhood development investments and programs, particularly given that many of these have expanded under the principle of reducing inequities and disadvantages before kindergarten. Research with an equity lens helps define inequities in present conditions that may determine outcomes, ensures that the research itself does not introduce biases, and captures the extent to which programs and policies reduce or increase inequities.

The summary above appears in the *Getting it Right Chapter Summaries* resource.

> **Start with the research questions. Are you trying to understand differences? If you don't think about this from the beginning, equity will not be addressed. Then think about your methods so that you can dig into differences in opportunities. If the goal is to learn about and improve equity, we have to reach out to others to learn. To admit, "My ideas may be wrong." To be flexible. To modify research questions and our approach as needed to keep the thread of equity running throughout the work.**
> (Nores interview, 10/21/20)
>
> **I do acknowledge that it is an ambitious goal, but at least we have equity in mind and we are trying to go in that direction… Ultimately, at the end of the road, we want to bring out voices of all sectors.**
> (Nores interview, 10/21/20)

The following themes, chapter excerpts from the *Getting it Right* full publication, and related questions are provided to stimulate additional engagement around the ideas and inquiry shared in this chapter.

1. Research can not only help bring to light what works in the early years but can also document how programs contribute to increasing equity (or reducing inequity) and at what point in the education process they do so. That is, it can help us understand the effectiveness, efficiency, relevance, impact, and sustainability of ECED programs with respect to equity goals… ***Yet we cannot escape the fact that research itself—and the measures, researchers, observers, interviewers and other agents of research—may introduce biases of its own to any evaluation process.*** And if questions pertaining to equity are not asked, then equity is not assessed at all (p. 278).

Equity in research implies capturing the extent to which programs, policies, and interventions reduce or increase inequities, validly defining inequities in relation to the context and the disadvantages that are present, and integrating the concept of equity into all components of research, from the questions asked to the analysis and interpretation stage. In sum, understanding equity means being able to answer questions that attend to equity concerns. Who are the less advantaged, and how does this evaluation capture their experience with ECED policies and programs? (p. 279)

> **Are your questions addressing equity in any way? If you don't consider this at the beginning, equity won't be addressed… Be thoughtful about where to embed equity, trying to keep perspective alive throughout… Research has to be fluid when trying to engage individuals and families with experiences and obligations. Keep it alive—the equity thread has to be alive throughout. This is what allows you to be intentional—to make decisions with a purpose.** (Nores interview, 10/21/20)

Discussion Questions

1. Choose any question that is of particular interest to you and could be the focus of a research study.
    - Does your question address equity specifically? If not, how might you go about answering this question while maintaining an equity focus? Consider the way your question is worded. Is there any way to change the wording of your question to ensure that it maintains an equity focus?
    - Why is it important for researchers to ask themselves the above questions prior to determining their research design?
2. How can early educators and leaders identify their own implicit and explicit biases in their work?
    - How can researchers do the same? How can these two groups assist each other with this identification?
3. What strategies can be used to reduce or mitigate bias in research and in practice?
    - What advantages could collaboration between researchers and practitioners have in reducing or mitigating these biases?

4. As a practitioner, what effects might your own personal biases have on the research you participate in, interpret, and/or disseminate? Provide specific examples.

5. What biases and inequities exist in current early childhood education and development systems? What biases and inequities exist in practice, within and amongst children, and in research?

6. What are the implications for the field and the children and families served if equity is not integrated into all components of research?

7. How can early educator preparation programs and professional development programs help equip practitioners with the knowledge and tools necessary to collaborate effectively with researchers?

    - Are there differences in the way preparation programs for pre-service early educators and professional development programs for in-service early educators might do this?
    - How might these preparation and professional development programs help practitioners collaborate with researchers on research that does not exacerbate inequities and on research that does address inequities?

8. How can practitioners implement anti-bias, anti-racist instructional approaches?

    - The first step in implementing anti-bias, anti-racist instructional approaches is acknowledging that inequities actually exist. What are the challenges in acknowledging and addressing these inequities? Why do you think so?

2. Equity, cultural competence and responsiveness, and intersectional approaches all interconnect in central ways in the design, collection, analyses, and interpretation stages of the research work. *At their core is an emphasis on understanding the complexity of social and power dynamics and an explicit attempt to recognize, measure, and assess differences, as well as reduce biases (as much as possible) and employ culturally appropriate methods* (p. 281).

Maybe your questions address equity. Be open to modifying your questions and approach as you collect data. You start looking at data, why does it look in a certain pattern? Maybe there is something you missed… Maybe your instruments need to be adjusted depending on all that you learn. There are so many differences, including gender, disability, race/ethnicity, language, minority status, or religion… Which one are you trying to surface? They are not independent. Trying to surface some to make them visible can lead to actions that address them. (Nores interview, 10/21/20)

Discussion Questions

1. In what ways is equity-focused implementation research influenced by what the practitioner and researcher bring to the work as individuals?
2. How do you explain the differences between the terms "culturally competent" and "culturally responsive"?
    - As a practitioner, how could you be more culturally competent?
    - How could you be more culturally responsive?
    - How would you articulate these aspects of your practice to researchers?
3. How can an equity perspective, cultural competence and responsiveness, and intersectional approaches be promoted in research involving populations from diverse racial, ethnic, cultural, linguistic, and socioeconomic backgrounds, especially when these factors are not independent of one another, and may differ from yours?
4. Choose a specific research question that you are interested in. How would you answer this question from an equity perspective?
    - How would you employ cultural competence and responsiveness?
    - How might you ensure an intersectional approach?
    - Provide concrete examples of how this would work with participants of different racial/ethnic and cultural groups and with participants from different linguistic and socioeconomic backgrounds.

- Given your responses above, how is research enhanced when it is grounded in equity-based perspectives, cultural competence, and intersectional approaches?

5. How can you, as a research team member, work to actively engage all stakeholders across the research process to promote equity and cultural competence?

3. Components of research. Thomas and McKie (2006) provide examples of how researchers' values, beliefs, and biases can compromise an evaluation process. The questions asked and the questions not asked, what is focused on versus what is minimized, the evaluation approach selected versus the one discarded, the data collected versus the data disregarded, the interpretations made, and how and to whom the results are presented can all undermine an evaluation.

An approach to research that truly incorporates equity requires integrating equity concepts across all these components, from questions asked to interpretation (Hood, Hopson, & Kirkhart, 2015) (p. 284).

Many of us are trained in one way of doing research. Reach out to others. Think of yourself as coming together and questioning together. If the goal is to improve and capture aspects of equity that will improve ECE for all, come with the view of growing yourself and your team. If I'm not the right person to do a study (e.g., Native Americans), that leads me to look to others. It still could be my research, my team, but I step back and someone representing the community may need to move to the front. (Nores interview, 10/21/20)

Discussion Questions

1. Choose three components of research from those listed in Chapter 12. In your role as a practitioner and member of a research team:

   - What are the potential equity considerations for each component?
   - How are they similar or different?
   - What are the unique challenges in addressing equity through the different components?
   - How could you reduce or mitigate any implicit or explicit bias that you have from the start in each of these three components?

Moving forward.

"I try to be humble. I strive to have an equity lens. As a researcher, it is impossible to address it all. In some places, issues of equity are less obvious. For example, race in a program that is 90% white. You still have gender, special ed, language. In a more rich context–you can see them–they are more obvious... Issues of equity exist everywhere. I'm not expecting myself or any researcher to see or know it all... But to be open to reaching out to learn. There is a whole other world out there." (Nores interview, 10/21/20)

1. As you look across your work using an equity lens as is described in this chapter, what do you see differently than you did before?
    - What do you see differently about yourself as a practitioner?
    - What do you see differently about yourself as a member of a research team and the way you communicate and engage with other members of the research team?
    - What do you see differently about your communication and engagement with the subjects of study (e.g., children, families, other practitioners)?
    - What do you see differently about the way you interpret research findings?
2. How can you ensure that you continue to use this equity lens moving forward in your work and your career?
    - How can you ensure that you stay abreast of research involving equity and how to best employ this equity lens through your practice?

ADDITIONAL RESOURCES

You may be at the point of collaborating with colleagues to integrate implementation research even more effectively into your work. To support and guide you in moving forward, here are related resources:

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Webinars

Getting it Right 2020 Webinar Series www.fcd-us.org/getting-it-right-webinars

Getting it Right: Using Implementation Research to Improve Outcomes in Early Care and Education Virtual Launch (June 30, 2020)

Getting it Right: Part 1: What more do we need to know about high-quality ECE programs (July 14, 2020)

Getting it Right: Part 2: Implementation Research in Early Care and Education (August 18, 2020)

Getting it Right: Part 3: Moving Towards Equity Through Implementation Research (September 2, 2020)

Websites

Learn more about the Foundation for Child Development's Young Scholars Program and view examples of implementation research
https://www.fcd-us.org/about-us/young-scholars-program

Learn more about the National Network of Education Research-Practice Partnerships (NNERPP)
https://nnerpp.rice.edu

Learn more about the New York City Early Childhood Research Network Studies
https://www.earlychildhoodresearchny.org/researchlibrary/projects/networkstudies

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