

Introduction

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Federal, state, and community agencies across the nation are working on an aspirational and ambitious agenda for the dramatic expansion of children’s learning opportunities in the years before kindergarten. This agenda requires that the settings in which our youngest children spend their days offer increasing learning opportunities throughout the day and across the year—a major difference from the existing, decades-old model of childcare. From the dramatic expansion of pre-K in New York City to the Obama administration’s Preschool for All initiative to preschool expansion grants nationwide, stakeholders are promoting early learning as a pathway to equalize opportunity for all, particularly at-risk and vulnerable children and families.

This early-learning agenda represents a watershed moment for the field: Americans are focused on expansion at a time when the overall early education and childcare system still needs great improvement, and educational leaders have little knowledge and too few examples in the field of early education to inform a high-quality effort at scale. As developmental psychologists and researchers concerned with promoting young children’s healthy development and well-being—professionals who regularly partner with communities and states in the implementation of several of these kinds of initiatives and policies—we are both excited and cautious about today’s momentum. To be sure, the central role of early education in a young child’s life has never been clearer for the individual

and for society. The foundations of lifelong health are established in the earliest years of children's lives. Moreover, young children develop these foundations for learning across the many settings in which they grow and learn, through strong and supportive interactions with caregivers, teachers, and other community members.

But there are very real barriers to going to scale—and addressing these barriers demands a theory of action that is not so much about early learning but about the science of implementation and scaling. In fact, a few key aspects of early education and care must be considered in the design, implementation, and eventual scaling of early learning practices and policies, and these aspects constitute the focus of this book. Recent history shows that even with significant investment of financial and human resources, efforts to promote young children's health and well-being all too often result in small, fleeting impacts. And even with the best of intentions, rapid scaling and expansion can result in unintended, sometimes even harmful, consequences for young children and their families. For today's unprecedented policy initiatives to drive substantially improved learning outcomes, leaders have much to learn and to act upon.

THE CALL FOR SCIENCE TO DRIVE EARLY EDUCATION POLICY

Today, educational leaders are responding to current policies that call for using research to improve and expand opportunities for children to learn from birth onward. For example, in the fall of 2014, the Harvard Graduate School of Education convened the Leading Edge of Early Childhood Education Initiative, a meeting of nearly three hundred influential leaders, scholars, and practitioners involved in early education around the world, to share their research and perspective on these issues. Focusing on topics such as the constellation of early risk, the promotion of language-rich and cognitively stimulating learning contexts, and the role of technology and media in early childhood, the meeting

was convened to make explicit links between science and policy for a new generation of pre-K children. The discussions and synergistic insights gained from all these experts sparked our inspiration for writing this book.

This book brings to the fore the pressing and diverse issues facing the field as educators and leaders meet the challenge of improving the quality of early childhood learning experiences, particularly when there is a call to expand access to those experiences. Many of the contributors to this book attended the Leading Edge of Early Childhood Education Initiative, where we persuaded them to share their expertise in their respective areas. As a group, the book's contributors weave together the most relevant and practical knowledge from the science of early learning and development and share some important lessons from recent implementation efforts.

THE BOOK'S ORGANIZATION

The chapters in this book cover a range of important issues. They range from systems-level topics, such as strengthening and scaling high-quality early learning practices to more focused, population-level issues, such as high-risk children and families, including children with special needs or negotiating two or more languages. The contributors also examine widely discussed and often-contentious issues salient to today's world—concerns such as effective child assessment and the role of technology in daily learning and teaching.

In chapter 1, Deborah Phillips discusses the particular importance of two fundamental issues confronting the early education community—economic instability and social exclusion—as they are contributing factors to children's experience of *toxic stress* (i.e., strong, frequent, or prolonged activation of the body's stress management system that adversely affects developing brain architecture). Phillips also highlights the promise of early educators as essential actors in implementing effective

instruction, protection from stress, and prevention of exclusion. She also calls for adult working conditions that are free from economic and other sources of stress.

Like Phillips, Dana McCoy brings us into the environment of early adversity in chapter 2 but does so more from a neuro-physiological perspective. She summarizes recent research in neuroscience suggesting that executive function and self-regulation play a central role in moderating the impacts of poverty-related stressors and risks on several important aspects of learning, behavior, and health. McCoy also outlines how children's regulatory skills can, and should, be developed within a coherent system of support during the early childhood period, a sensitive period for their development.

In chapter 3, Amy Pace, Kathy Hirsh-Pasek, and Roberta Michnick Golinkoff show that a high-quality language environment is the basis for a high-quality learning environment. They focus on how today's policies ought to focus on the creation of language-rich learning environments. The authors offer six principles of language development derived from the science of learning. These principles can be used to advance high-quality communication in the home, in the classroom, and in the community.

In chapter 4, Gigi Luk and Joanna Christodoulou build on Pace and her colleagues' synthesis, focusing on children from multilingual, low-income households. Examining key findings from research on language and cognitive development among multilingual young children from low-income families, the authors describe the consequences of bilingualism. To take advantage of the benefits of dual-language learning and to offset the disadvantage of low socioeconomic status, the authors discuss and recommend both children's risk assessment that is more culturally sensitive and efforts to build adult capacity.

In chapter 5, Lauren Rubenzahl, Kristelle Lavallee, and Michael Rich describe the role of technology and media in early childhood learning. They argue that to be most effective, media need to be in-

corporated into the overall curriculum with clear pedagogical intent. Rubenzahl and her colleagues outline fundamental principles and offer practical recommendations for using media effectively in early education settings.

Chapter 6 focuses on the complex issues of early identification and intervention designed to better support children at risk for developmental delays and/or disability. Beth Rous and Rena Hallam map the landscape of assessment types and purposes, taking an approach that recognizes the need for assessment of the individual and the setting. They also present several systems-level issues that prevent educators from effectively gathering and using assessment data to support young children's development and their own classroom practice.

Given the recent press for workforce development and two-generational initiatives, in Chapter 7, Teresa Eckrich Sommer, Terri Sabol, P. Lindsay Chase-Lansdale, and Jeanne Brooks-Gunn extend the conversation to focus more squarely on the adults who support children's healthy development and learning on a daily basis. The authors zero in on two-generation programs designed to improve parents' education and career training and young children's school readiness at the same time with the goal of boosting the life chances of both. They suggest ways to make two-generation programs a reality, including potential funding mechanisms and pilot programming that could help advance the science behind these programs.

In the book's conclusion, we look toward the next steps—the future of the field of early childhood education and these salient issues of expansion and improvement. Specifically, we focus on several key insights and high-impact levers that should be considered when designing and implementing early learning practices and policies, and we raise important questions. In so doing, we draw on the tremendous work represented in this book, the insights and comments of participants at the Leading Edge meeting, and recent advances in the developmental and implementation sciences. Our goal is to contribute to the current

dialogue and ongoing policy shifts with science-based, concrete recommendations that are relevant at the level of direct implementation and high-quality practice and to ongoing discussion about the challenges of scaling.

Jacqueline Jones, a visionary and former state and federal policy maker in early education, has contributed an afterword to the book. She remains central to the dialogue, and as president of a national foundation dedicated to supporting optimal development for all young children through high-quality learning opportunities, she exhorts educational leaders to continue this mission and to use this book as a springboard for their work.

MOVING FORWARD

This book uncovers the important issues that must be addressed if our collective work is to have the very tangible and positive impact we are striving toward. Whether you come to this book as a governmental policy maker, a district superintendent, a head of an early childhood program, a funder or nonprofit leader, a practitioner in a leadership role, or a student in the early childhood field, this book is meant to inform and catalyze your important work. We hope that this resource—which captures an especially important moment in the early education world—can guide your quality improvement efforts, thereby enhancing the lives of the children and families your work serves and supports.