



The Early Learning Study at Harvard: New Science to Advance Early Education

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Background*

Decades of early childhood research documents that the years before kindergarten—the first 60 months of a child’s life – comprise a “sensitive period” for the development of language, social-emotional, and cognitive skills. During this period, the brain is explicitly designed to recruit information from its surrounding environment and lay the neural architecture for life. At the same time, families across the United States rely upon a system of early education and care that public policymaking expects will give children a developmental boost in the years before formal schooling begins.

Yet the link between the science of early childhood and public policymaking is a weak one, compromising the design and execution of a successful strategy for scaling and improving early education and care. Much of the research focused on programs and settings is decades old and/or reflects single studies of models that would be considered multi-component, intensive, and mostly small-scale. Such models include the highly-intensive, comprehensive programs that served at-risk children in the 1960s and 1970s; the oft-studied Perry Preschool Program, for example, has been shown to influence outcomes through adulthood, including educational attainment and employment. More recently, scholars have focused their efforts on examining the overall effects of public preK in urban school districts serving relatively small numbers of 4 year-olds,

when the majority of young children are in community-based programs and centers. In addition, very few studies have looked at the more informal settings where many children are each day—settings such as group childcare in a home or care provided by neighbors and relatives.

As cities and states across the nation expand their early education and care systems, research must move beyond the broad question of whether specific programs “work” to more complex questions of how to build and sustain systems that are relevant and high-impact. A robust science is needed to inform the design and scaling of high-quality early learning environments for all, and across different setting types, to match today’s population and contexts. This science should also address unresolved questions—questions that center on identifying the essential processes and micro-features that can be scaled across a mixed-delivery system in a manner that will truly drive optimal child growth and development. Not unlike other fields that are engaged in quality improvement efforts and that have practice at the core, the field of early education and care needs evidence to inform a human capital strategy characterized by high-lever practices and interactions that are effective across many types of settings.



A 21st-century research agenda to advance early education therefore has these objectives:

1. It brings the science up to date to match today's childhood demographics, given increasing linguistic, cultural, and economic diversity, and the many setting types in which children receive their early education and care. Research that reflects today's population and today's systems is critical to transforming quality.
2. It provides concrete, actionable guidance to the field about: (1) the key outcomes that are particularly sensitive to high-quality early learning environments (e.g., those related to vocabulary, higher-order thinking, or self-regulation skills), and (2) the features of early education and care environments (e.g., instructional lessons, language interactions) that promote children's development. In so doing, it uncovers micro-features of early education and care settings to inform an effective scaling strategy across the mixed-delivery system.
3. It addresses big questions and concerns about the role that early experiences play in later outcomes, including those related to "fade out"—the term used to refer to the finding that positive effects of high-quality early education have in some instances not been sustained through the school years. The topic of fade-out is long-standing and controversial within the field, and the science around it remains very mixed. Some findings raise questions about whether early education and care is simply "not enough" to carry lasting benefits for children, while others suggest that what is measured in school fails to capture the key skills and competencies that are cultivated during the early years and in fact remain assets throughout the lifespan.

The Early Learning Study at Harvard: A groundbreaking approach to informing early childhood education at scale

To bridge the gap between research on early childhood as a sensitive developmental period and the everyday decisions and major investments of public policymakers, Professors Stephanie Jones and Nonie Lesaux launched the Early Learning Study at Harvard (ELS@H, pronounced "Elsa"). ELS@H is a large-scale, longitudinal study of young children's learning and development that explores and documents the features of the settings in which young children receive their early education and care. Drawing on approaches in public health research, the ELS@H sample of participants is representative of the population of 3- and 4-year-olds living in the Commonwealth of Massachusetts. It is also representative of the major types – both formal and informal – of early education and care that families use. Ultimately, the study will include 5,000 children from across all types of early education and care. Because ELS@H employs a representative sample, its findings reflect and are relevant to all children across the Commonwealth, and to the state's mixed-delivery system





Study design: Sampling and data collection

We used three strategies to recruit a sample of children that represents the population of 3- and 4-year-olds in all types of early education and care environments across the state of Massachusetts (including non-licensed providers who are frequently left out of research in this area). The three sampling strategies are as follows:

The foundation of the ELS@H sample: A household survey

Census blocks in the state were divided into six strata based on their average poverty level (low and high) and geographic location (Eastern Massachusetts, Western Massachusetts, and greater Boston). An equal number of Census block groups were then randomly selected within each stratum for a total of 168 across the state. Trained field workers were tasked with visiting every home in each of the selected Census block groups to locate and recruit families with children ages 3 or 4.

During their visit, field workers asked the families of 3- and 4-year-old children to respond to a series of questions, including items about the types of care and education selected for their young child, their confidence in their child's care and education, and their greatest worries for their children's future. Details on the household survey's methodology and complete results are presented in the report entitled *Early Learning Study at Harvard: Household Survey Full Report*. Results of the household survey are also summarized in the brief entitled *The Early Learning Study at Harvard: Findings from the Household Survey*.

1. A household survey was conducted with more than 90,544 households in 168 Census block groups across the Commonwealth. These households were selected through a stratified random sampling approach. Through the survey, 841 children were recruited to participate in ELS@H.

2. Network sampling was used to recruit children in education and care at the same early learning setting as children who entered the study via the household survey. Network sampling resulted in the recruitment of an additional 482 children to the ELS@H sample.

3. Random sampling of licensed settings from administrative data collected by the MA Department of Early Education and Care and the Department of Elementary and Secondary Education was used to recruit children who received education and care in selected settings. An additional 1,898 children were added to the ELS@H sample via licensed setting sampling.¹

In the first year of the study, we recruited 3,228 children², their families, and their early education and care providers to participate using the sampling techniques described above. Through online surveys administered during the first year of the study, we collected detailed information from children's parents or guardian(s) as well as participating early education and care providers.

¹ We intentionally over-sampled children participating in public school-based prekindergarten and Head Start settings across the state because they are not as common as other early learning setting types in the Commonwealth; to make valid comparisons between these setting types and other setting types, we had to increase the number of children in those groups.

² There are seven children who are yet to be categorized by their sampling type and thus the counts for each sampling type add up to 3,221.



Study design: Sampling and data collection, cont'd

The parent survey asked primary caregivers a variety of questions about their daily lives, wellbeing, and parenting practices. It also asked caregivers to provide specific information about their child’s wellbeing, routines, and education and care arrangements. The provider survey similarly asked providers to report on their own wellbeing and to provide specific information about individual children. We also observed children’s early education and care settings. In some cases, if the child’s primary form of early education and care was at home with a parent, the child’s home environment was observed. Trained field workers also conducted direct assessments with children to document children’s academic skills, including language, literacy, and early math, as well as their social-emotional competencies, including executive functioning, emotional regulation, and behavior. In subsequent years of the study, the same instruments will be used in order to examine children’s growth over time in these skills and competencies. In addition, we will continue to collect information directly from parents and providers and to conduct observations in children’s education and care settings.

Characteristics of Early Learning Environments

- **Structures** (e.g., physical environment, compliance with health and safety regulations, etc.)
- **Processes** (e.g., type & nature of language interactions, emotional tenor of adult-child interactions, cognitive press, daily routines)

In-Depth, Sustained Observations

Surveys of Parents and Care Providers

Children's Learning and Development

- **Language Skills**
- **Literacy Skills**
- **Numeracy Skills**
- **Cognitive Skills (e.g., executive functions)**
- **Social and Emotional Skills**

Direct Assessment

Surveys of Parents and Care Providers

Summary

A first-of-its-kind study, ELS@H is uniquely designed to address some of the most significant questions facing today’s early education and care field. In the coming years, we plan to continue to document and describe children’s daily environments — from home, to preschool, to elementary school – and to make links between features of these settings and children’s learning and growth. The findings from ELS@H will ultimately inform a scalable strategy guided by the goal of ensuring that all children have access to early learning experiences that will set them on a path toward academic and personal success.

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