



WHAT IS PK-3 RESEARCH?

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A PK-3 approach connects and integrates the learning experiences of children ages three to eight, from PK through Grade Three. PK-3 is characterized by joint planning by teachers in and across these grades to provide a coherent, developmentally informed set of sequenced experiences for children from one school year to the next. Standards, curriculum, instruction and assessment are based on knowledge of children's development over this period. The focus is not only on subject matter competency, but also the development of social, self-regulatory, and motivational capacities critical to support learning.

While not common in the current public education system, some school districts and schools—including independent and charter schools—organize their programs to span grades PK (some beginning with 3-year-olds) through Third Grade. The Chicago Parent-Child Centers are examples of a PK-3 approach. At the federal level, this approach was embodied in the Follow Through program by the architects of Head Start. The basic idea was that well-integrated early and early elementary education provided the necessary foundation for later academic success.

WHAT ARE THE COMPONENTS OF PK-3?

PK-3 components are drawn from the literature on effective schools, intervention/prevention, early childhood education, and developmental science. Six PK-3 components are: School Organization/Principal Leadership; Qualified Teachers; Classrooms as Learning Environments; Alignment and Coordination; Assessment and Accountability; and Family and Community Engagement. Strong principal leadership, high quality teachers and classroom environments, and coordination of curricular approaches as well as high expectations for all children are widely cited in the effective schools literature. The value-added of a PK-3 Approach is starting early (i.e., 3 years old), and a focus on developmentally informed learning experiences from the PK years through at least Third Grade. While we have some knowledge about the effectiveness of high quality PK programs and some K12 research that indicates effective practice in schools, these two literatures have evolved in isolation without the recognition that schooling is an accumulative process that begins in PK and continues into elementary school and beyond. PK-3 research aims to address this gap, and inform education practice and policy so that all children's learning opportunities are maximized.

WHAT DISTINGUISHES PK-3 RESEARCH FROM PK IMPACT STUDIES?

First, based on this conceptualization of the foundation of early school success, PK-3 research identifies strong achievement and healthy development by the end of Third Grade as the desired outcomes. The focus is shifted away from "school readiness" at the beginning of Kindergarten to a longer-term view of success by Third Grade.

Second, shared accountability distributes responsibility for children's growth and development across multiple stakeholders and years (3-8). Responsibility for Third Grade outcomes is shared across PK programs, grades K-3, families and communities. Neither one year (e.g., PK) nor one institution (e.g., family) is held responsible for Third Grade outcomes. How child development varies by educational experiences, and family and community contexts, at different time points is integral to PK-3 research.

Third, PK-3 research involves longitudinal investigations of change and stability in contextual features and child outcomes through multiple years, assessing the accumulation of experiences across interacting contexts that shape year-by-year and ultimately long-term developmental outcomes. Too often, contextual features are examined at PK and then correlated with student outcomes at a single subsequent point in time (e.g., one year later, four years later). This latter approach essentially assumes PK is a silver bullet that inoculates children over a number of years, leading to positive developmental outcomes by Third Grade and beyond. But research has shown that there is no magic bullet to ensure positive development.

Rather than measure **only** the PK context and then relate these variables to Kindergarten readiness or Third Grade outcomes, PK-3 research includes measures of intervening contexts through Third Grade. Children's schooling experiences from K-3 should be measured and added to the formula for student achievement and well-being. The combination of PK + K-3 experiences will provide a richer, more detailed understanding and a better prediction of developmental outcomes than does the simple correlation between PK and a solitary end point.

WHY IS PK-3 RESEARCH NEEDED TODAY?

While studies of intervention programs such as Perry Preschool, Abecedarian, Head Start, and Chicago Child-Parent Centers have informed policymakers about the importance of the early years and potential of high quality intervention programs, the future of educational research must for numerous reasons go beyond examining programming (intervention or otherwise) that occurs prior to school entry. First, the sample sizes and demographic characteristics of children who participated in the Perry Preschool and Abecedarian studies were small and restricted to low-income, non-urban African American families thus reducing generalizability to larger segments of the U.S. population of children today. The fastest growing group of children is Hispanic, many of whom are English Language Learners.

Second, research has not taken into account that the context for programs for young children has changed. The comparison groups included in these studies did not benefit from much of the high quality work on PK standards and expectations that took place over the last decade. Moreover, in contrast to the era when the Perry Preschool, Abecedarian, and other studies were conducted, researchers today must recognize that the majority of young children today are in some form of out-of-home care. When the majority of children in the comparison group receive center care, the likelihood of achieving statistically meaningful effect sizes for treatment will be decreased.

Third, most of these studies did not measure variations in the quality of educational settings past the intervention year. The Chicago Child-Parent Center study, on the other hand, surveyed teachers retrospectively about their teaching practices in PK through Third Grade, in addition to reporting about other classroom and school characteristics. By measuring variations in

children’s early elementary school experiences, we should learn more about what children need in addition to PK to sustain or maximize the gains they made by attending high quality PK programs. If policymakers were only concerned with Kindergarten readiness, then investigating educational settings that maximize PK gains through at least Third Grade would not be important. But policymakers are concerned with outcomes such as performance on Third Grade tests, high school dropout, grade retention, and special education rates—all of which occur past Kindergarten entry. Thus, investigating which types of contexts maximize performance on these benchmarks will be important contributions to our knowledge that can be used to maximize children’s potential to succeed in school and life.

WHAT ARE THE ESSENTIAL DOMAINS IN THE CONDUCT OF PK-3 RESEARCH?

Four domains should be considered in the conduct of PK-3 research: ecological, developmental, multiple outcomes, and methodological/analytical. Ecological refers to the measure of multiple contexts, and in PK-3 research this includes PK, K-3 and family at the minimum. Other contexts could include neighborhood/community and policy. A developmental approach includes multiple data points on child outcomes across the period from PK through at least Third Grade with a focus on stability and change. Multiple outcomes should include more than just a focus on academics. Rather PK-3 research includes relational and cognitive outcomes as well as parent and teacher functioning, among others. Methodological and analytic considerations include research questions, samples, and measures that allow conclusions to inform practice and policy in the education of children in their first six years of schooling.

Examples of how each domain could be approached in PK-3 research follow:

- I. **Ecological**– Multiple contexts measured at multiple time points
 - a. Home—parental stress, language environment, stability and structure
 - b. Classroom – teacher preparation and in-service professional development, classroom climate, and time-use
 - c. School – Principal leadership and time allocated to teacher collaboration across grade levels; school climate; connection to parents and communities
 - d. Neighborhood – more distal for young children 3-8 years old, but may act as a context that influences proximal individuals in the child’s life.
 - e. Education policy environment both at state and district levels (eg. Testing, assessment, and accountability, provision of PK and full-day K; professional development; coordination across PK and K-3 years)
 - f. The intersection of home, community, school, and policy environments and their influence on children’s development is understudied in diverse groups of children 3-8 years old, but should be a major focus of PK-3 research

- II. **Developmental Approach**
 - a. Context stability and change over multiple years (PK through Third Grade)
 - b. Context quality over multiple years (PK through Third Grade)
 - c. Child outcomes measured over multiple years

- III. **Multiple Outcomes**
 - a. Child development outcomes— academics and beyond

- i. Peer relations and child-adult relations
 - ii. Behavioral regulation and attention
 - iii. Cognitive flexibility and memory (executive functioning)
 - iv. Content area achievement as measured by standardized tests
- b. Parent outcomes
 - i. Satisfaction with child's school, parent involvement in child's schooling, communication with teachers, future aspirations for their child
- c. Teacher outcomes
 - i. Satisfaction with their job, retention/stability, professional growth

IV. **Methodological and Analytic Considerations**

- a. Research questions
 - i. How changes in achievement and well-being vary by contextual quality, and contextual stability over time from at least 3-8 years old.
- b. Sample characteristics
 - i. Particular attention is given to who the children are in the sample the generalizability of the results (e.g., race/ethnicity, immigrant status, family income, parent education, etc.)
- c. Measures
 - i. Particular attention must be paid to measures chosen for bilingual and English Language Learner (ELL) children.
- d. Secondary data analysis
 - i. Administrative data on children PK through Third Grade in combination with other forms of data that provide school and classroom quality can inform PK-3.
- e. Qualitative, ethnographic, comparative case studies
 - i. Data provide explanations for why certain relationships and processes are observed.
- f. Place-based random assignment experiment
 - i. Aims to inform the impact of PK-3 program implementation on multiple outcomes.
 - ii. The quality and degree to which programs implement PK-3 components must be documented prior to determining program impact.