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Early Literacy Interventions for Preschool Children Living in Poverty

Felicia Robinson

University of Arizona

Abstract

The association is strong between poverty and poor cognitive, social, and academic outcomes for children. The influence of early childhood education on the healthy development and future well-being of children who are economically and socially disadvantaged has become a vital policy concern with important implications for families, communities, business, and government. The early childhood educational experiences of young children are crucial for the development of school readiness skills and later school outcomes. The purpose of this study was to contribute a formative analysis in the area of early childhood literacy interventions for children at risk due to low socio-economic by conducting a review, synthesis, and analysis of current research on the effects of early childhood education on children from lower socio-economic backgrounds.

### Early Literacy in Preschool Children Living in Poverty

Forty percent of all young children in America live in low-income families and twenty percent of these families survive with incomes less than the national poverty level (National Center for Children in Poverty, 2006). Poverty can be defined as the shortage of common things such as food, clothing, shelter and safe drinking water, all of which determine quality of life. The influences of childhood poverty on development have been multiple, diverse, direct, and indirect (Huston, McLoyd, & Garcia Coll, 1994; Lemer, Castellino, Terry, Villarruel, & McKinney, 1995). Campbell, et al (2005) found that children's early learning environments are affected by socioeconomic status. For example, compared with kindergarteners from families in the bottom fifth of the socioeconomic distribution, children from the most advantaged fifth are four times as likely to have a computer at home, have three times as many books, have the opportunity to be read to more often, and have less television time than children in families of lower socioeconomic status.

Poor children were more likely than their affluent peers to experience poor physical or mental health, to be raised by parents who have completed fewer years of education, and to grow up in households that are less cognitively stimulating, which can negatively affect children's cognitive and academic attainment (Anderson-Moore, 2009). The association is strong between poverty and poor cognitive, social, and academic outcomes for children. Children born in poverty, especially children who are exposed to multiple risks (e.g., single parenting, minority status, health problems, chronic poverty, very-low-income neighborhood, and high levels of incidental stressors), are likely to have measured IQs lower than middle-class peers (Campbell & Ramey, 1994), to be slower in

developing language and literacy skills (Hart & Risley, 1995), and to show poorer performance on academic tests and in school contexts (Korenman, Miller, & Sjaastad, 1995).

The influence of early childhood education (ECE) on the healthy development and future well-being of children who are economically and socially disadvantaged has become a vital policy concern with important implications for families, communities, business, and government. Young children living in poverty face substantial education deficits and are less likely to enroll in preschool than their counterparts from higher socio-economic backgrounds. The early childhood educational experiences of young children are crucial for the development of school readiness skills and later school outcomes. Poor reading skills during preschool and early elementary school are predictors of later lower academic success and increased high school drop out rates.

Bernhard, Winsler, Bleiker, Ginieniewicz, & Madigan (2008) found evidence that children living in poverty have considerable difficulty with literacy, including reading, letter recognition, text comprehension, and the production of written text. School intervention programs have been successful in improving the developmental outcomes of children living in poverty. As early childhood education becomes the focus of public policy debates, more attention is being paid to early literacy. Policymakers, educators, and community stakeholders are developing an interest in early intervention policy and programs, with a special concern for reading readiness and emergent literacy skills in young children. Early literacy plays a key role in providing the kind of early learning experiences that are linked with academic achievement, reduced grade retention, higher graduation rates and enhanced productivity in adult life. Increased policy attention to

early childhood is warranted by evidence regarding the implications for early childhood development, as well as the efficacy of early education programs.

### Research Questions

Participants in early education programs demonstrate short-term gains in performance on standardized tests of intelligence and academic ability. Participants also have reduced later grade retention and special education placement. However, disagreement exists about how these gains are produced, what they mean, whether they persist, and what other long-term consequences might be expected. Influencing curriculum and policy recommendations can be difficult without resolving some of these disagreements. In the United States research efforts have been accompanied by the requirement that data are scientifically rigorous, quantitative, and empirical from experimental or quasi-experimental studies showing the efficacy of educational or curricular interventions (Feuer, Towne, & Shavelson, 2002; U. S. Department of Education, 2003).

The purpose of this study is to contribute a formative analysis in the area of early childhood literacy interventions for children at risk due to low socio-economic by conducting a review, synthesis, and analysis of current research on the effects of early childhood education on children from lower socio-economic backgrounds:

1. What components of effective early literacy interventions improve literacy development of young children living in poverty?
2. What type of early childhood education programs are effective in the literacy development of young children living in poverty?

## Method

### *Selection of Empirical Articles*

The search engine EBSCOhost and three databases (Academic Search Complete, Educational Resources Information Center (ERIC), and PsycINFO), were used to search and select articles with the parameters of peer reviewed empirical articles. Any article found within these databases was considered for the analysis. Articles were located based on key word searches and footnote chasing. Key words included *early literacy*, *emergent literacy*, *early interventions*, *preschool interventions*, *poverty*, and *at risk populations*. The terms *early literacy and poverty* resulted in nine articles. A review of the abstracts or studies revealed that two researchers focused on grant writing strategies, researchers published in England focused on changing English educational culture. To expand the number of articles, *emergent literacy and preschool interventions* were included, which resulted in 36 articles. The selected articles were published in journals across disciplines, including special education, speech-language, and early childhood education, and school psychology.

Fourteen articles were selected based on the following criteria:

1. The study included articles data based with qualitative, quantitative or mixed research designs.
2. The study included preschool children ages 2-5 at risk due to low socio-economic status or developmental delay.
3. The study included students receiving early literacy interventions.

Program type and intervention approach for each study selected for this literature review are outlined in Table 1.

### Theoretical Framework

This research analysis was conducted through the epistemology of the theories of cognitive development, social constructivism, and ecological systems theories as early literacy skills develop in real life settings through positive interactions with literacy materials, other people, and environments. The experiences of infancy and early childhood provide the organizing framework for the expression of children's cognitive and social/emotional development. Neuroscientists (Frost, 1968, 1975; Hess, 1968; Hunt, 1961) have documented how complex cognitive capacities are built on earlier foundational skills and that the rate of cognitive development appears to be the result of a variety of types of stimulation during infancy and early childhood. Frost (1998) found that preschool interventions may improve lifetime outcomes in part through the possibility that learning begets learning. Mastery by young children of a range of cognitive and social competencies may improve their ability to learn when they are older.

Vygotsky (1978) theorized that play is an integral part of children's culture. Play is a symbol system relevant to young children's literacy development. Make believe play, drawing, and writing can be viewed as different moments in a unified process of development of written language. As a symbolic activity, pretend play allows children to develop and refine their capacities to use symbols to represent experience and to construct imaginary worlds, which they will draw upon when they begin to read and write. As children take on roles in pretend play, literacy behaviors cross into other fields of expression.

Aldrige, Sexton, Goldman, Booker, & Werner (1997) found Piaget's theory of social constructivism to be relevant to early childhood literary development as the social

constructivist views each learner as an individual with unique needs and backgrounds. The learner is seen as complex and multidimensional, and encouraged to arrive at his/her learning, influenced by background, language, and culture. Without social interaction with other more knowledgeable people, acquiring social meaning of important symbol systems and incorporating them into learning is impossible. Young children develop their thinking abilities by interacting with other children, adults, and the physical world. From the social constructivist point of view, the background and culture of the learner must be considered throughout the learning process.

Bronfenbrenner (1990) viewed childhood development within the context of Ecological Systems theory, examining a child's development within the context of the system of relationships that form his environment. Bronfenbrenner defined the complex layers of biological cognitive development, the familial and cultural environment, and the community environment as each having an effect on a child's development. The interaction between factors in the child's maturing biology, his immediate family, the community environment, and the societal landscape fuels and steers his development. To study a child's development, one must look not only at the child and the immediate environment, but also at the interaction of the larger environment and the impact on school readiness.

## Results

### *Components of Effective Early Literacy Interventions*

The review of current research studies in the area of early childhood literacy interventions for children at risk due to low socio-economic was consistent across researchers in finding the components of effective early literacy interventions for young

children to be an embedded-explicit approach to literacy instruction, parent involvement, and professional development opportunities for teachers.

*Embedded-Explicit Model of Early Literacy Interventions.* Bernhard, Winsler, Bleiker, Ginieniewicz, and Madigan (2008); Winsler et al, (2006); Justice, Kaderavek, Fan, Sofka, Perkins and Cooter, Jr. (2005) and Elliott and Olliff (2008) blended social constructivist and cognitive development theories in implementing an embedded-explicit model of emergent literacy intervention for young children at risk. Embedded-explicit approaches to early literacy intervention is an integrated method of directed, contextualized interactions with oral and written language embedded throughout the preschool day, with a focus on instructor directed interventions targeting skills that are linked to later reading success.

Bernhard et al (2008) implemented an embedded-explicit emergent literacy intervention through the use of a culturally based language enrichment program with a population of 90 African American four year olds using the Language Enrichment Activities Program (LEAP) curriculum. The LEAP curriculum and teacher training components emphasized the areas of receptive and expressive language, phonological awareness, knowledge of the letters of the alphabet, basic concepts, and prewriting fine motor skills.

In their research, Elliot and Olliff (2008) focused on embedded-explicit emergent literacy interventions with children ages 2-5, in a large urban community, using the Early Literacy and Learning Model (ELLM). Similarly to the LEAP curriculum, the ELLM program is a curriculum designed to improve the language and pre-literacy skills of young children. The curriculum was created to provide direct instruction in alphabet knowledge, phonological awareness, and print concepts in an environment that is developmentally appropriate for young learners. Teachers developed literacy rich classroom environments as

a part of the program. As a result of examining the needs of their students, teachers adapted the program for younger participants, which may affect intervention fidelity.

The embedded-explicit intervention model provides a balanced approach to young children with socially embedded opportunities for meaningful, naturalistic literacy experiences, in addition to direct instruction targeting critical emergent literacy goals. The integrated model of the embedded-explicit approach to the teaching of young children at risk due to poverty is an integral component of successful early literacy instruction.

*Parent/Family Involvement.* Parent involvement was a consistent component in effective early literacy intervention programs in the studies reviewed. Cognitive development theory, socio-constructivist theory, and ecological systems theory was the epistemological lens through which parent involvement affected development of early literacy skills. The longer-term effects of early intervention will occur to the extent that program participation enhances the capacities of parents to support children's learning and development (Reynolds, 2004). Parenting participation may include home support for learning as well as participation in school-related activities. A central goal of early childhood interventions is to promote family development, often through the provision of family education activities.

Bernhard et al (2008) drew on family and cultural experiences and knowledge to create preschool activities connecting classroom literacy practices with students' home and community cultures using the Early Authors Program (EAP). Study participants included 367 preschool age children and their parents from a linguistically and culturally diverse low socio-economic community. Researchers provided 13 literacy specialists in providing ECE teachers and parents with training and materials to instruct preschoolers in writing and self publishing age appropriate literacy and book-making activities. The intervention focus was to improve early childhood skills in print awareness, text comprehension, and phonological

awareness through the social and cultural context of emergent literacy by participating in culturally relevant literacy experiences within the classroom.

Elliott and Olliff also found family involvement to be a factor important to the successful implementation of early literacy intervention. In the adapted ELLM project, teachers not only informed families of their child's progress in acquiring emergent literacy skills, but also provided home activities for advancing the children's knowledge and skills. Families were encouraged to reinforce the skills and knowledge children were learning at school in the home environment. Teachers encouraged this participation by demonstrating to families the importance of children's progress and interest in the learning of literacy behaviors supported in the classroom. Families became active participants in extension activities by reading to their children the trade books from the lending library, asking questions about the daily bracelets, and singing songs along with their children to and from school each day. In turn, the teacher routinely informed families of children's progress. This information provided families with the opportunity to understand how their children were advancing in emergent literacy skills and knowledge development and for children to demonstrate their successes.

Arnold, Zeljo, and Doctoroff (2008) studied the relationship between parent involvement in preschool and children's emergent literacy skills. Examining 163 preschool children, their parents, and the preschool teachers in an urban setting, researchers made advances in understanding predictors of early involvement. Socioeconomic status levels and single parent status were found to be predictors of lower levels of involvement in their children's education, while depression was not found to be a correlate to parent involvement. The effect size of this study was in the small to medium range. Parent involvement occurs within a social context. The environment

created by the educational staff is critical to the parents' sense of empowerment and contribution to their child's educational success.

*Professional Development of Teaching Staff.* Teacher quality, including qualifications, behaviors, and practices, is a dimension of the theory of social constructivism and the social environment that is related to the development of children's social and behavioral skills. Winter and Kelly (2008) suggest that increasing the educational attainment of teachers, alone, is insufficient for improving children's academic gains and developmental outcomes. Teachers' professional development may be influential in improving their interactions with children, including the social support they offer to children in the classroom environment.

Prior to the implementation of the Early Literacy and Learning Model for young children, Elliott & Olliff (2008) identified teacher knowledge of emergent literacy as one of the most critical factors in the success of the program. Teachers had to be cognizant of the emergent literacy process including the knowledge and skills required of children as they learned about literacy. In addition, they had to be mindful of the emergent literacy levels of each child in the group and to be able to use this information in forming literacy related questions for each individual child. Teachers designed activities that enhanced the acquisition of emergent literacy knowledge and skills, possessed not only knowledge of emergent literacy but also sensitivity toward the individual needs of young children. In these classrooms, as in most typical early childhood centers, children vary in both their depth and breadth in understanding of how literacy works. The teachers in this study continuously observed, monitored, and assessed children to modify activities based on information gained regarding children's progress.

While assessing critical skills for school readiness, focusing on emerging literacy skills, Hawken, Johnston, and McDonnell (2005) conducted a national survey of Head Start preschool teachers to assess their views and practices related to emerging literacy instruction. They found that Head Start teachers used a variety of strategies with a focus on book knowledge and print awareness skills. While teachers endorsed the concept that emerging literacy skills should occur daily, they indicated a lack of knowledge in utilizing instructional strategies to improve phonological awareness skills.

Landry et al (2006) examined the impact of a professional development model in implemented embedded-explicit instructional practices with 750 (500 target, 250 control) Head Start teachers. Systematic training procedures across two intervention years were implemented to train teachers in providing balanced instruction in phonological awareness and print knowledge. Trainings consisted of small group interactive learning, opportunities for practicing specific skills, and side by side in class coaching. The researchers found that the greater positive program effects were found in gains in children's phonological awareness across both years when teachers had more education. This effect was moderated by the type of curriculum chosen by each site with greater gains demonstrated with the use of a focused language and literacy curriculum.

#### *Effective Programs in ECE Literacy Development*

A recent report by the U.S. Department of Health and Human Services documents a lack of coordination between Head Start preschool, state-based preschool, and community based preschool programs, which results in duplication of services, service gaps, and lack of communication and information sharing between programs. Head Start is a federally funded program that provides preschool services, as well as child and

family services to children in poverty. Head Start provides education, health and social services to eligible families with the goal of ensuring the children enrolled are ready to start school. Eligibility for Head Start services is largely income-based, although eligibility criteria such as disabilities and services to other family members is considered. The Reauthorization of Head Start Act legislates guidelines for the training of Head Start teachers and aides. By 2013 all Head Start teachers must have an associates degree and half must have bachelor's degrees.

State funded, public preschools serve children age three to five in a group setting at least twice weekly. The preschools are directed and funded by the state, with early childhood education as the primary focus, although programs may include parent education. State-funded preschool education must be distinct from the state's system for subsidized child care. However, preschool programs may be coordinated and integrated with the subsidy system for child care. The preschools are not primarily designed to serve children with disabilities, but services may be offered to children with disabilities. Preschool teachers are required to have obtained at least a bachelor's degree and state certification in early childhood education.

Community child care centers are defined by the United States Department of Labor as of establishments that provide paid care for infants, toddlers, preschool children, or older children in before- and after-school programs. legislation typically defines what constitutes daycare, and may specify details of the physical facilities and may mandate staffing ratios. Staff typically do not require any qualifications but staff under the age of eighteen may require supervision.

Campbell et al found that the most effective preschool programs are center based. The researchers conducted a study comparing school and life outcomes for participants in the program to those of a randomly selected control group of children who did not participate in center based preschool programs. As a result of this study, the researchers found that at risk children who participated in high quality center based programs exhibiting better language and cognitive skills in the first few years of elementary school than non participant peers.

Winsler et al (2006) researched school readiness gains made by 1,478 ethnically diverse children in poverty attending center based, publicly funded at-risk preschool, and fee supported public preschool programs. Although participants in all programs made gains, there were significant differences across programs in how much children gained in the areas of cognitive and language development. Children in the at-risk publicly funded preschool showed greater gains than children in the community based preschool. While children from low income environments increased slightly in behavior concerns reported, children in fee supported programs reported a slight decrease in behavior problems.

### Discussion

The need for all young children to be better prepared to enter school ready to learn is evident. Researchers found that the literacy learning strategies thought to be most effective are consistent with conclusions described in the Report of the National Reading Panel (National Institute of Child Health and Human Development, 2000). Emergent literacy interventions for young children living in poverty is most effective when explicit-embedded instruction is provided by knowledgeable teachers, in collaboration with the familial and cultural environment, and the community, and the impact on school readiness. This requires a program that provides thoughtful and purposeful instruction that begins with

unique experiences. Without these connections it is difficult, if not impossible, to construct comprehensive vocabularies or multilayered understandings of the world.

Language and literacy skills are critical to success in school. For low income preschoolers, increasing early literacy skills is vital to closing the achievement gap between them and their more advantaged peers (Klein & Knitzer, 2007). Providing high quality preschool experiences and academic support can begin to close the achievement gap and reduce poor social outcomes for children from disadvantaged background. Policies that provide high quality preschool programs are essential to the academic success of children from economically disadvantaged families. This review of current research demonstrate that improving early literacy skills for young children living in poverty has implications for state and local policymakers, educational administrators, and researchers.

State and local policymakers must allocate resources to ensure that an investment is made in quality early childhood programs that are tied to providing developmentally appropriate, content driven classroom instruction. Educational administrators must implement and sustain professional development opportunities that are linked to classroom curriculum that provides direct feedback about classroom practice through an ongoing coaching model. Researchers can improve knowledge in this area by conducting empirical studies to assist in determining the sequence and content of curriculum most effective for young children, while developing effective measures of early childhood program quality.

School readiness has become a community issue with greater community accountability and increased collaboration among local, state, and federal agencies and organizations. When approached from a community accountability perspective, early

education efforts can efficiently utilize resources to promote school readiness.

Consequently, researchers have recommended encouraging communities to make investments in programs aimed at improving children's school readiness (Brown, Amwake, Speth, & Scott-Little, 2002; Murphey & Burns, 2002; Pianta, 2007; Weigel & Martin, 2006). The influence of the preschool years on children's later achievement and success is not well reflected in current federal and state government policies. Efforts to improve young children's school readiness with proven, high-quality programs should play a much more prominent role in America's antipoverty strategy.

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