

# Child Care & Early Education

## RESEARCH CONNECTIONS

RESEARCH BRIEF

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### ABOUT THE PROJECT

Child Care and Early Education *Research Connections* (CCEERC) promotes high quality research in child care and early education and the use of that research in policymaking. Our vision is that children are well cared for *and* have rich learning experiences, and their families are supported and able to work.

*Research Connections* is a partnership among the National Center for Children in Poverty at the Mailman School of Public Health, Columbia University, the Inter-university Consortium for Political and Social Research at the Institute for Social Research, University of Michigan, and the Child Care Bureau, Administration for Children and Families of the U.S. Department of Health and Human Services.

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The Child Care Bureau (CCB) was created January 11, 1995, to provide a central focus for federal child care programs. CCB is dedicated to enhancing the quality, affordability, and availability of child care for all families.

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**Child Care and Early Education  
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## PROMOTING LANGUAGE AND LITERACY IN EARLY CHILDHOOD CARE AND EDUCATION SETTINGS

## INTRODUCTION

The foundation for life-long literacy is established during the early childhood years. Emergent literacy and language acquisition skills precede the ability to read and write and influence later literacy skills development. Young children who develop an awareness of and interest in literature and language are more likely to enter school with increased early literacy skills and to experience academic success in later years.

This brief summarizes *Promoting language and literacy in early childhood care and education settings: Literature review* (Halle, Calkins, Berry, & Johnson, 2003, see [www.childcareresearch.org/location/ccrca2796](http://www.childcareresearch.org/location/ccrca2796)), a more extensive review of research on programs to promote language and emergent literacy in early childhood care and education settings for children ages three to five. The literature review focused on ‘targeted interventions,’ that is, programs designed specifically and exclusively to enhance children’s language and literacy development, as well as on ‘comprehensive interventions,’ that is, programs that include a language and early literacy component but aim to improve multiple developmental outcomes by offering additional services (e.g., home visits, parent support groups, pediatric check-ups) sometimes starting in infancy, and usually running for longer periods of time than targeted interventions. Examples of comprehensive interventions are the High/Scope Perry Preschool Study, the Infant Health and Development Program, the Abecedarian Project, the Early Head Start Research and Evaluation Project, and the Chicago Child Parent Center and Expansion Program. The review only selected studies that followed rigorous empirical research designs and were published in peer-reviewed journals. A table summarizing the studies cited in the larger review is located at [www.childcareresearch.org/location/ccrca2797](http://www.childcareresearch.org/location/ccrca2797).

## EMERGENT LITERACY

Emergent literacy refers to the earliest signs of a child’s interest in and abilities related to reading and writing (Whitehurst & Lonigan, 1998). Researchers in the field agree that emergent literacy is made up of several key components:

### Key Components of Emergent Literacy

- ▶ Phonemic awareness—a subset of phonological knowledge that includes the understanding that speech is composed of units (e.g., words, syllables and sounds) and the ability to use speech units.
- ▶ Letter recognition—also called the alphabetic principle—the ability to associate letters with their appropriate sounds.
- ▶ Awareness of print—the understanding of words and the conventions of print (i.e., that words convey messages, that printed words correspond to spoken words, and that English print moves from left to right and from top to bottom).
- ▶ Early writing development—attempts to produce written text, such as scribbling or inventing language and spelling.
- ▶ Oral language development—vocabulary development and the understanding of the uses and conventions of spoken language.

## PROMISING APPROACHES

Research on targeted interventions aimed at improving young children’s language and literacy has identified several promising approaches.

- ▶ *Shared reading.* Research consistently finds that reading aloud to children or storybook reading is a key component in the promotion of emergent literacy. Researchers note that a dialogic or interactive reading style is particularly effective (Whitehurst, Arnold et al., 1994). Interactive reading in small groups with preschool children improves children’s vocabulary and print awareness skills. Shared reading on a one-to-one basis also expands vocabulary and print awareness (Reese & Cox, 1999), as well as the number and complexity of children’s responses to stories

(Morrow, 1988). Multiple exposures to a story and repeated conversations about its novel words enhances receptive and expressive vocabulary (Senechal, 1997).

- ▶ *Targeted phonological skills development.* Interventions that specifically target phonological development show an increase in children's phonological awareness (Byrne et al., 2000).
- ▶ *Print-rich environments.* Increasing the amount of environmental print (e.g., word signs) in children's classrooms is shown to increase the likelihood that children will engage in literacy-related play (Neuman & Roskos, 1993). However, this strategy seems to require adult involvement to become a meaningful early literacy activity (Christie & Enz, 1992).

In sum, a variety of strategies improve children's language and literacy skills during the preschool years and beyond: reading aloud to children in an interactive style (either one-on-one, or in small groups), phonological skill development, and increasing the amount and quality of environmental print in the early childhood education setting. It is not possible to say which approach works the best, or which one works better than another. The studies on targeted interventions illustrate that there is not one approach that seems to work best for all children, but that various approaches can achieve positive results. There is also some indication that combining effective approaches within a single intervention may be beneficial. In contrast, comprehensive interventions that implement high-quality child care and preschool programs tend to show stronger statistical effects on child outcomes than targeted interventions, and the effects of the interventions typically endure for longer periods of time.

## DISSIPATING EFFECTS OF INTERVENTIONS

The findings in many of the studies reviewed in this brief are not robust: in some studies, gains present in preschool do not persist into the elementary school years. Interventions lasting over an entire preschool year may have more chance of achieving long-term

effects. Researchers argue that the educational environments children are exposed to in kindergarten and during the elementary school years may affect their literacy skills development, a claim that needs to be considered when evaluating the longitudinal effects of preschool interventions (Reynolds, 1994; Whitehurst et al., 1999).

## DOMAIN SPECIFICITY

Multiple skills are involved in literacy and language development, and it is not clear that proficiency in one area carries over to another area of literacy development (Byrne et al., 2000). Further, the relative importance of different domains is not known. Research clearly indicates, however, that frequent reading aloud to and with children enhances multiple areas of literacy development, specifically, vocabulary, print awareness, and writing (Morrow, 1988; Reese & Cox, 1999; Whitehurst, Arnold et al., 1994).

## METHODOLOGICAL ISSUES

The review of the literature revealed methodological challenges and limitations in the existing research on language and early literacy interventions.

- ▶ *Fidelity of implementation.* "Fidelity of implementation" refers to the extent to which all the intended components of an intervention are actually implemented as planned. Lack of or weak intervention effects may be the result of failing to implement interventions as intended (Whitehurst, Arnold et al., 1994; Whitehurst, Epstein et al., 1994).
- ▶ *Duration.* "Duration" of an intervention means the length of time the intervention lasts. Research suggests that the longer the duration of the intervention, the stronger the results to be expected. However, duration and timing of the intervention can be confounded in many of the comprehensive early intervention studies (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002), making it hard to establish whether the length or the timing of the intervention is the most important factor.

- ▶ *Dosage.* “Dosage” refers to the amount of intervention received. Several researchers have speculated that more intensive training of children with their intervention model would produce stronger and longer-lasting results.
- ▶ *Instruments and measures.* Many of the reviewed studies did not include documentation on the reliability and/or validity of the measures used. In these cases, it is more difficult to evaluate the adequacy and strength of the measures, and may affect the interpretation of the outcomes of the studies.
- ▶ *Isolating intervention effects.* Interventions, even targeted ones, commonly consist of multiple components, yet the data analysis is not performed in such a way as to capture the relative influence of distinct, often overlapping, program components.
- ▶ *Comparison group controls.* Many studies employ a control group to compare with the group receiving the intervention. Differences in children’s literacy skills are commonly observed prior to the intervention, particularly in those studies where the assignment of participants to comparison and treatment groups has not been at random. There are several strategies that can attempt to mitigate the effects of these initial differences. Researchers need to report and account for initial group differences so that observed gains are not erroneously attributed to the intervention.

## WHAT WE NEED TO KNOW

Further research is needed to address several gaps in the existing literature and, in particular, to illuminate strategies that might prove successful in promoting emergent literacy in nontraditional settings. Future research studies should answer:

- ▶ *What works with language-minority children?* It is important to address the needs of non-English speaking children because of the rapid growth of this population in recent years. The number of children who speak a language other than English at home has doubled, from 5.1 million in

1980 to 10.6 million in 2000 (Fix & Passel, 2003). By 2015, children of immigrants may represent 30 percent of the nation’s school population (Fix & Passel, 2003). Research suggests that children with a primary language other than English are more likely to become fluent readers of English if they have a strong understanding of their primary language (IRA & NAEYC, 1998).

- ▶ *What works in home-based child care settings?* Little is known about the impact of specific literacy and language curricula or activities in these settings. It is not clear whether the same strategies that work in center-based settings are also effective in home-based settings. Research does suggest that parents can be taught to use an interactive book reading technique with their children (Whitehurst, Arnold et al., 1994).
- ▶ *What are the literacy levels of providers?* Little is known about the levels of the child care and early education providers and their impact on children’s learning. Analyses of licensed center and home-based child care providers in Alameda County, California, as part of the Who Leaves, Who Stays Longitudinal Study, suggest that, controlling for other factors, three factors significantly predict literacy levels: (1) having a primary language other than English, (2) race, and (3) wages. Specifically, non-English speaking providers, African-American and nonwhite, non-Hispanic providers, and providers with low wages in this study had significantly lower English literacy scores. When examining center-based and home-based providers separately, analyses revealed that English literacy scores were significantly predicted by race and wages for center-based providers, and were significantly predicted by having a primary language other than English for home-based providers. These analyses suggest that caregivers’ own English literacy skills are a significant factor in caregivers’ ability to establish literacy-rich environments for children. Moreover, these analyses point to a serious need to address the English language proficiency of home-based child care providers. Further research on larger, more nationally representative samples of child care providers is called for.

## THE POLICY LANDSCAPE

The current policy landscape provides opportunities for the promotion of early literacy skills in early childhood education settings. The Bush administration has made early childhood education a priority in its education agenda. The administration's centerpiece early childhood initiative, Good Start, Grow Smart, has three components: (1) Changes to the Head Start program, including a system to ensure that Head Start centers meet standards of early literacy, language, and numeracy; (2) State-level voluntary guidelines for emergent literacy and quality criteria in early childhood education programs as part of state plans for Child Care and Development Funds;<sup>1</sup> and (3) A public awareness campaign designed to provide parents, child care providers, and early childhood educators with information on early childhood development.

Grant making efforts include the Early Reading First component of the No Child Left Behind Act of 2002. This grant making program targets preschool-age children. Priority is given to programs that utilize methods with a strong research base: 30 grants were awarded in 2003. The U. S. Department of Education's Institute of Education Sciences (IES) has given grants under the Preschool Curriculum Evaluation Research Grants Program (PCER). The grants support random-assignment evaluations of well-designed preschool curricula. The research will follow children from the pre-kindergarten through the end of the first grade. A total of 13 grants have been conferred since 2002.

These policy initiatives and grant making programs offer a variety of supports to promote language and early literacy among preschool-age children. However, additional funds are needed to create emergent literacy programs in a range of early childhood care and education settings, as well as to conduct rigorous research of both targeted and comprehensive early literacy efforts. Such funding will ensure that effective language and early literacy strategies are developed to meet children's multiple and diverse needs.

<sup>1</sup> To assist states, the Child Care Bureau provides technical assistance and leadership.

## CONCLUSION

The studies considered in this brief show that a number of strategies can be successful in promoting language and emergent literacy among preschool-age children. These strategies include reading aloud interactively, building phonological skills, and creating print-rich environments in child care and early education settings. All of these strategies require or are improved by interaction between adult caregivers and children. Thus, early education providers play a critical role in facilitating emergent literacy among children. Additional factors can also influence the effectiveness of a literacy intervention. These factors include, but are not limited to, how closely the intervention model is followed during implementation; the intensity of the intervention (dosage) and/or the length of the intervention (duration); and characteristics of providers, such as their own literacy skills.

The current policy landscape provides much opportunity to assist early child care and education settings in promoting early literacy, however, more support is needed, particularly in the areas of direct program support and rigorous evaluation research.

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