



Executive Summary

Preschool children who participated in a media-rich curriculum incorporating public television video and games into classroom instruction develop the early literacy skills critical for success in school, according to a new study. These foundational skills — being able to name letters, knowing the sounds associated with those letters, and understanding basic concepts about stories and print — all increased among the 4- and 5-year-olds in the study. These preschoolers were from traditionally economically disadvantaged communities where children are often far less prepared for school than their more affluent peers. The study was conducted between January and June 2009 by researchers at Education Development Center, Inc. and SRI International with a grant from the Corporation for Public Broadcasting and the U.S. Department of Education.

These gains among 4- and 5-year-olds are significant. Although a number of studies have shown that digital technologies are promising for improving learning in K-12 schools, technology use in *preschool* has been controversial. Critics argue that television and computers have no role in an active preschool classroom in which teachers seek to create a learning environment that promotes interaction among them and the children. The teachers who participated in this study were asked to engage their children in a range of media-rich literacy activities, from active video viewing to hands-on play with letters, sounds and books.

This study reports that preschool teachers who implement a curriculum that integrates video content with teacher-led activities can improve their students' early literacy skills. Given training and support in classroom activities to reinforce the skills presented in the videos, the teachers were able to conduct the curriculum successfully and help their students learn. This is noteworthy because the teachers in the study were similar to many preschool teachers serving low-income communities: They had little prior training in literacy instruction and worked in schools with limited access to curriculum materials of proven effectiveness.

The study was commissioned by the Corporation for Public Broadcasting to evaluate video and interactive games from *Super Why!*, *Between the Lions* and *Sesame Street*, which are produced for PBS as part of the *Ready to Learn Initiative*. To measure the impact of the study's curriculum, the researchers conducted a randomized controlled trial with 398 low-

income children from 80 preschool classrooms. The preschool teachers were randomly assigned to implement either a 10-week technology-supported literacy curriculum or a 10-week technology-supported science (comparison) curriculum. The researchers tested children in both sets of classrooms before and after implementation and provided both initial training and ongoing coaching for the teachers in both curricula.

Children who participated in the literacy curriculum outscored children in the comparison curriculum on all five measures of early literacy used in the study; four of the five differences were statistically significant. The posttest results were as follows.

- *Naming letters:* Children in the early literacy curriculum classrooms knew an average of 21.2 letters compared with 16.8 letters for children in the comparison classrooms.
- *Knowing the sounds of letters:* Children in the early literacy curriculum classrooms knew an average of 10 letter sounds compared with 6.3 for children in the comparison classrooms.
- *Knowing concepts of story and print:* Children in the early literacy curriculum classrooms earned 10.8 points on average on the test of story and print concepts, whereas children in the comparison classrooms scored an average of 9.5 points.
- *Recognizing letters in child's own name:* Children in the early literacy curriculum classrooms knew an average of 2.7 letters in their names, whereas children in the comparison classrooms knew 2.5.

Also of note was that every teacher who began the study remained in it and was able to carry out the curriculum as designed by the research team. With the help of training and coaching visits to classrooms, the preschool teachers delivered the curriculum with a high degree of fidelity and in ways that supported the active engagement of children. Teachers showed the children videos an average of nearly two times per week, almost exactly as the curriculum intended.

These results show that a media-rich curriculum with integrated professional development for teachers can prepare low-income children for school success. The results also provide evidence of the success for the Corporation for Public Broadcasting in its *Ready to Learn Initiative*, which promotes literacy using multiple forms of media to deliver educational programming in a variety of settings, including preschools.

The next steps are to test this curriculum in other settings and with other subjects.