

Home Literacy, Summer School, and Kindergarten Readiness among Bilingual Preschoolers in Low-Income Families

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Abstract

Low-income children can excel in a nourishing preschool environment that sets the stage for childhood, adolescence, and adult literacy success. Twenty five-year old VPK (voluntary preschool) American children, 11 girls and 9 boys, provided parents' home literacy self-reports and of those, 9 children attended summer school. It was found that the additive effects of home literacy and summer school improve midsummer vocabulary and print knowledge, and to a lesser extent, math and phonological awareness. Neither HL nor SS alone is sufficient to maintain kindergarten readiness.

Young children can excel in a nourishing preschool environment that sets the stage for childhood, adolescence, and adult literacy success. Preschool experiences may be able to counter known predictors of risk, such as poverty and circumstances of stress associated with home and food insecurity, (Fritters, Barron, & Brunello, 2000; Ransdell, 2011). Parents can also provide their children with summer school experiences and home literacy materials provided by the school for summer practice. Summer is a notorious time for decreases in school readiness, especially among younger children (Cooper, Charlton, Valentine, Muhlenbruck, & Borman, 2000). The purpose of this research is to better understand the impact of summer school and home literacy among children attending VPK in an urban area of South Florida. VPK is voluntary prekindergarten available at no cost for all families of 4 year-old children.

Home Literacy

Many researchers have shown the impact of home literacy, as measured by reading and writing in the home, in complementing school activities (Evans, Shaw, & Bell, 2000; Frijters, Barron, & Brunello, 2000; Griffin & Morrison, 1997; Payne, Whitehurst & Angell, 1994; Roberts, Jurgens, & Burchinal, 2005). In the present study, a home literacy checklist adapted by the author from Payne et al. (2000) was given to preschool student parents at the end of the summer to determine the extent to which these parents reported making use of materials given to them. Home literacy materials included books, exercises, games, educational toys, and other activities. Evidence has shown that home literacy materials can improve and even sustain children's early literacy development (Barbour, 1999; Dever & Burtis, 2002). It is expected that home literacy is mutable, that is, simply offering materials and suggestions for use can lead to improved literacy and reduced risk from summer absence. Furthermore, it is predicted that increased home literacy will be predictive of better kindergarten literacy readiness, especially for those children at most risk because of economic and social stressors and because they did not attend summer school. Home literacy is powerful because parental reading beliefs and practices have been shown to mediate the role of emergent literacy training (Cottone, 2012). The home learning environment has been shown to encourage specific reading skills and to provide unique prediction to children's kindergarten readiness beyond contributions to social and emotional regulation skills (Hindman & Morrison, 2012).

Bilingualism

It is well-known that early bilingualism, especially home use of native language accompanied by preschool use of another, may be associated with often short-lasting language delays, especially in phonological awareness and vocabulary. Bialystok, Luk, Peets, and Yang (2010). Bialystok et al. have shown that bilingual children may temporarily possess a smaller receptive vocabulary, especially for home, rather than school context words.

This effect may also interact with SES (i.e., Fritters, Barron, & Brunello, 2000). The socio-economic status of children in the present study is such that those with the most limited economic resources are also those with the least English experience. Most of the participants in the present study are Haitian-American children immigrating to the United States after natural disaster. Champion, McCabe, and Colinet (2003) describe the Haitian-American storytelling tradition and how it might impact our literacy materials use. Champion et al. report that Haitian-American families tell fully expressed stories as a natural part of adult-child interaction. They go on to say that children tell stories and expect adults to recount stories to them as part of home activities. These are all signs that home literacy materials might be particularly well-received especially if they involve oral traditions and storytelling.

In the present study, children and their families were provided with home literacy materials, half of which also attended summer school, in the summer between VPK and kindergarten. Summer school was elected by about half of parents, in part no doubt based on cost and permanency of summer residence. At the end of the summer, all parents were asked how the home literacy materials were used to improve kindergarten readiness. Four measures of skill were measured, phonological awareness, print knowledge, math, and receptive vocabulary. These four measures were obtained for each child at four intervals within the school year. The purpose of this research is to show the relative impact of summer school attendance and home literacy on kindergarten readiness. It is predicted that children who attend summer school will be better prepared for kindergarten as evidenced by less skill loss and controlling for amount of home literacy engagement based on self-report.

Method

Participants

Of 20 five-year old VPK children, 11 girls and 9 boys, 12 provided parents' home literacy self-reports and 9 children attended summer school. Eleven children spoke no English upon entering preschool, seven spoke some English, and two were native speakers. All children but the two native speakers and one Spanish speaker are Haitian-American. All live in an area of higher than average poverty. The primary home language of the Haitian-American children is Haitian Kreyol, a dialect of French and some other indigenous language elements. After receiving IRB approval for human subjects research, parents were asked for informed consent to ask them questions about home literacy and to obtain their children's DOE kindergarten readiness scores already collected from the school. The preschool was conducted entirely in English, but a few of the teachers were native speakers of Kreyol. The author served as a volunteer at the school, reading library books twice a week, but had no formal contact with the parents.

Design

All children were assessed on four measures of kindergarten readiness, print knowledge, phonological awareness, math, and vocabulary at four intervals over the school year by assessments of the Florida Department of Education, as do all children in the federal VPK program. The final measure of each skill was taken at midsummer and used as the criterion for kindergarten readiness. All children were given home literacy bags with books and other materials to work on over the summer. Parents returned a Summer Feedback on Home Literacy questionnaire in order to assess the extent to which they provided home literacy opportunities related to the study materials (see Appendix A). Affirmative responses on the Home Literacy questionnaire were scored as 1 point each and the total was used as an estimate of home literacy behaviors (i.e., Evans, Shaw & Bell, 2000). Correlation and regression techniques were used to predict the midsummer effects of home literacy and summer school. The construct, home literacy, may be imperfectly measured by a single, self-report questionnaire, but in combination with summer school attendance, may be a good predictor of kindergarten readiness (i.e., Dever & Burtis, 2002).

Procedure

All children in the VPK class attended regular classes over a 180 day standard school year. During that year, four one-on-one assessments of print knowledge, phonological awareness, math, and vocabulary were collected by their regular teachers as part of DOE VPK assessment. Half of all children attended summer school based on parent election. Summer school was associated with a cost of 640 dollars for two months, while school year VPK was free. Summer school election then is a cost-benefit analysis by parents who are constrained by economic factors. Activities in summer school were school-related, but were more centered around social play.

Results

The additive effects of home literacy (HL) and summer school (SS) improve midsummer vocabulary and print knowledge, and to a lesser extent, math and phonological awareness. Neither HL nor SS alone is sufficient to maintain kindergarten readiness. All children make vocabulary progress at each of the four intervals of testing. Both children who attend summer school, and those that do not attend show gains as expected from the developmental period (i.e. Payne, Whitehurst, & Angell, 1994). For those attending SS at time 1 a vocabulary mean of 13.00 (SD = 5.89) was obtained, at time 2, mean = 16.5 (5.45), time 3, 22.4 (1.66) and midsummer time 4, 22.0 (1.41). For those children who did not attend summer school, the comparable means and SDs were time 1, 11.27 (3.69), time 2, 16.0 (5.53), time 3 = 21.4 (3.43) and time 4 20.6 (2.30). Summer school was elective and driven in part by cost therefore a composite of risk and protection. HL and SS was derived from obtained scores and used additively to create a composite variable called Protection. Protection revealed that low protection was associated with lower vocabulary scores at midsummer time 4. Only at midsummer is vocab reliably lower for those with low protection, $F(1,11) = 11.03$, $p < .01$. All other time periods are not different between low and high protection. See Table 1 for vocabulary at each time for high and low Protection.

Bivariate correlations show that neither HL nor SS alone are correlated with midsummer vocabulary (both $r_s < .40$), but Protection is reliably correlated, $r = .77$, $p < .01$ with midsummer vocabulary, as is print knowledge $r = .68$, and math $.63$.

A multiple regression analysis shows that 57% of the variance in self-reported home literacy (HL) is accounted for by summer school attendance and second language experience, $R = .81$, $t(19) = 8.89$, $p < .05$. The lack of summer school attendance may be a factor parents compensate for by providing more HL, especially for those children with less native English experience. HL is significantly higher for children who do not attend summer school, $t(19) = -3.97$, $p < .05$, and who have less native English experience, $t(19) = 2.60$, $p < .05$ and both are unique predictors. Despite higher HL reported in children who did *not* attend summer school, these children showed a significant decline in receptive vocabulary measured at time 4 in midsummer. See figure 1. Summer school has a greater impact than does HL even though the two have a reliable and inverse correlation, $r = -.62$, $p < .05$.

Because of the complex, correlational nature of HL and SS, regression models were tested predicting midsummer skill, the best marker of kindergarten readiness, by using a composite score of HL and SS, Protection. The most predictive model of midsummer vocabulary and print knowledge was found by including Protection, time 1 skill, HL, and SS. For time 4 midsummer vocabulary, R square adjusted was $.61$, $F(4, 11) = 5.32$, $p < .01$. And see Figure 1. Models to predict midsummer phonological awareness were not reliable, most likely due to the rapid and then steady performance by native and nonnative speakers alike with the first weeks of school. See Figure 2. Midsummer math was reliably predicted by a similar model as vocabulary with R square adjusted at $.50$, $F(4, 11) = 3.85$, $p < .05$. See Figure 3. Finally, print knowledge was predicted, like vocab and print knowledge by a model with time 1 skill, HL, SS, and Protection, R square = $.55$, $F(4, 40) = 4.40$, $p < .04$. See Figure 4.

Discussion

Despite the fact that parents seemed to compensate for not sending their children to summer school by increasing home literacy activities, those children who attended summer school did better, especially in receptive vocabulary and print knowledge relative to their peers who did not attend. Recall that summer school is also likely a statistical proxy for SES. All children in this sample were lower than median SES, but these results show that even among low SES, there is differentiation that can be addressed by intervention (i.e. Barbour, 1999). The fact that a composite of the additive effects of home literacy and summer school best predicts midsummer skill suggests that both are necessary and neither is sufficient. No cost VPK during the regular school year should be supplemented with no or low cost summer school. Home literacy materials should be routinely provided for sustained kindergarten readiness, especially for low-income bilingual children. As Bialystok and others have found (Bialystok et al., 2010), bilingual children may have metacognitive advantages that can offset low income and other risk factors. Champion, McCabe, and Colinet (2003) even found that Haitian-American children may benefit from oral storytelling and other home literacy activities that may not be captured by existing tools.

Ransdell (2011) used a similar regression approach to find the relative impact of poverty and bilingualism on literacy at the school level. Poverty as measured by a composite of family income, mother education, and the percentage of children in the school receiving free or reduced lunch remains predictive of school performance, even when a large number of other risk factors are considered.

In the present study, small, but reliable gains in academic performance can be achieved with minimal intervention, especially with increases in parental involvement. When parents are asked to provide self-reports of home literacy behavior, and are given simple home literacy materials, it is likely that they are validated in their use of them. As is recently reported in Hindman and Morrison (2012), there is much to be gained by studying home learning environments. Path models from their research showed that parent support and shared reading practices uniquely predicted literacy skills in middle-income children. The present study begins to uncover the additive link between parent support in the form of summer school and self-reported home literacy to low-income children.

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Appendix A

Summer Feedback on Home Literacy

We hope you liked the home literacy bags of goodies we sent home at graduation. Please think about what you did over the summer with your child. We want your feedback to improve the bags next year.

Feedback

Did you use the alphabet books? If so, how did you use them and how often?

Did your child read the books on their own?

Did your child color the books on their own?

Did your child talk about the books with you or ask for you to read them?

What did you like best about the bags?

What would you change about the bags?

What I or another adult do... TRUE FALSE

I or another adult in the house encourage my child to tell me what he or she wants using complete sentences.

I or another adult in the house take my child to the library or a bookstore at least once every two months.

What I am... TRUE FALSE

I am a good reader.

I have a large vocabulary.

I began to read picture books with my child before he or she was a year old.

I enjoy reading picture books with my child.

I expect that my child will work to his or her potential in school.

Now or in the past, I or another adult encourage or help my child... TRUE FALSE

I or another adult in the house encourage my child to watch beginning reading shows on TV or tapes (e.g., Between the Lions on PBS).

I or another adult in the house encourage my child to play with computer games that introduce the alphabet and beginning reading (e.g., Reader Rabbit).

I or another adult in the house help my child learn to sing or say the alphabet.

I or another adult in the house help my child learn to name letters of the alphabet.

I or another adult in the house help my child learn to write letters of the alphabet.

I or another adult in the house help my child learn to write his or her name.

I or another adult in the house help my child learn to write other people's names.

I or another adult in the house help my child learn how to rhyme.

I or another adult in the house help my child learn the sounds that letters of the alphabet make (e.g., "M makes the mmmm sound").

Thank you very much for your time.

Table 1. Mean receptive vocabulary scores and SDs at time 1, 2, 3 and 4 (midsummer) for children with high and low Protection (a composite of summer school and home literacy). *Only at midsummer is vocab reliably lower for those with low protection.

	<u>Low Protection</u>	<u>High Protection</u>
Vocab1	10.6 (SD = 4.5)	12.2 (2.0)
Vocab2	15.0 (4.0)	16.6 (3.7)
Vocab3	19.5 (4.7)	23.0 (3.7)
Vocab4	18.5 (4.1)	22.0 (1.5)*

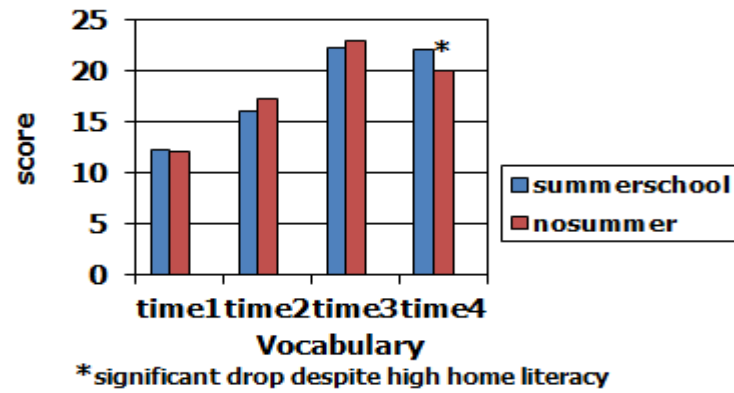


Figure 1. Receptive vocabulary scores at four intervals, including time 4 at midsummer for children who attended and did not attend summer school.

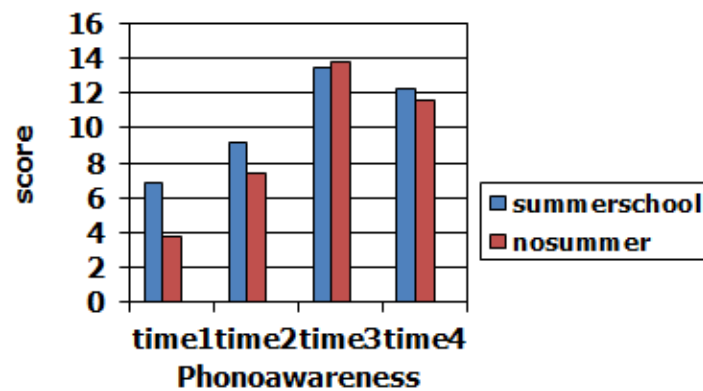


Figure 2. Phonological awareness scores at four intervals, including time 4 at midsummer for children who attended and did not attend summer school.

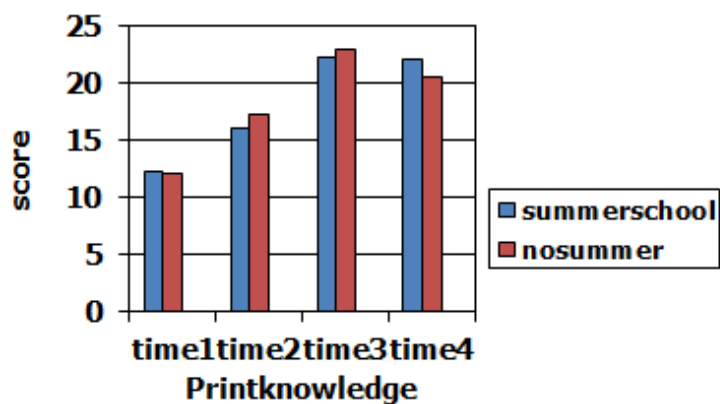


Figure 3. Print knowledge scores at four intervals, including time 4 at midsummer for children who attended and did not attend summer school.

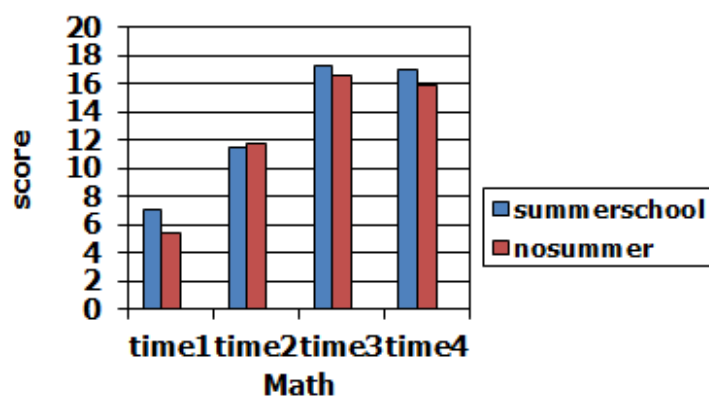


Figure 4. Receptive vocabulary scores at four intervals, including time 4 at midsummer for children who attended and did not attend summer school.