

Literacy for All: Key Elements of a Successful After-School Reading Intervention Program

Erin Kershner

Adults often ask children, “What do you want to be when you grow up?” Regardless of the answer, in order to make their dreams come true, children must first become successful readers and writers. A report by the Annie E. Casey Foundation (2014) indicated that students who are able to comprehend text on grade level by the end of third grade are more likely to graduate from high school and obtain successful employment in adulthood. Yet, despite efforts to improve reading comprehension for students in the early grades, 20% of US fourth graders from households of poverty were reading on grade level at the time of the report, compared to 51% of students from households with higher income. Neither of these two percentages is particularly strong, but the 31% gap between students of poverty and students of means suggests that educators have a significant problem to tackle in our nation’s elementary schools.

The negative effects of functional illiteracy on quality of life have been described extensively by the World Literacy Foundation. While complete illiteracy refers to the inability to read and write at all, functional illiteracy refers to an inability to apply reading, writing, or mathematical skills in a way that enables the individual “to accomplish tasks that are necessary to make informed choices and participate fully in everyday life” (World Literacy Foundation, 2015, p. 4). In both developed and developing nations, individuals with lower literacy skills earn about one-third less than their literate peers, with little opportunity to increase their earnings over the course of a lifetime, while literate individuals can expect to triple their earnings from start to end of their careers (World Literacy Foundation, 2015). Illiteracy is linked to lower quality of life issues such as health problems caused by limited access to preventative health programs, good hygiene, and proper nutrition. There is a strong correlation

between crime and illiteracy, with a high percentage of incarcerated individuals being illiterate. Illiterate parents cannot read to their children, increasing the chances that their children will start school approximately one year behind children from literate families, thus repeating the cycle of illiteracy and poverty. The cost of illiteracy, not just to the individual, but also to the nation, is staggering. The World Literacy Foundation (2015) estimated the cost to the U.S (in welfare, health care, and judicial services) to be \$362 billion, or 2% of its annual gross domestic product (GDP). Because the ability to read is fundamental to success in our culture and the success of our culture, governments and school districts continually search for evidenced-based interventions that will effectively close the reading achievement gaps, enabling all students to experience success in school and beyond.

Prior to 2016, efforts to provide additional, targeted reading support to students at risk of reading failure in one Virginia school district had been designed by individual schools and dependent upon individual school budget constraints. All elementary schools employed at least one reading specialist to work daily with the most struggling students. Most schools employed classroom teachers to provide weekly after school intervention, although the content and duration of the intervention varied. Some schools also employed hourly tutors, again with varying curriculum targets, instructional approaches, and intensity. Methods of identifying the students for these various interventions varied not only from school to school but also from grade level to grade level within the same school.

The school district’s strategic plan called for a comprehensive, coordinated approach to intervention that would help guarantee that 100% of students would be on grade level in reading and math

by 2017 (Charlottesville City Schools, 2011). Reading achievement, as measured by the state's Standards of Learning (SOL) tests, generally held at 75-80% proficient, with sizable achievement gaps between all students and Black students, students with disabilities, and economically disadvantaged students. To fulfill the goal of 100% proficiency, the school district applied for and received a grant from the Virginia Department of Education for extended school year/school day funds. This three-year, \$300,000 grant afforded the school district a year for planning and two years to implement an evidenced-based after-school program for students in grades 1-6 aimed at improving students' reading achievement and attitudes about reading. The program, called Extending the Bridges of Literacy (EBL), completed its first year of implementation in the spring of 2017 at all seven elementary schools.

Rather than rely on a ready-made curriculum for intervention, the school district decided to design a program that incorporates some of the most significant evidence-based practices for literacy learning: vocabulary instruction, additional time for high volume-high interest reading, and engagement through student-centered activities in small, supportive environments. This approach takes the long view of literacy instruction, building skills and habits while also exposing students to the positive social-emotional aspects of reading. The success is designed to be self-reinforcing so that students learn the joy of reading, reap the benefits of greater independence as a result of newfound reading abilities, and pave the way toward becoming literate, productive, self-actualized members of society. What follows is a review of the extant literature surrounding the key elements of the theory of action for the Extending the Bridges of Literacy (EBL) program—the importance and effectiveness of vocabulary instruction; additional time for high-interest independent reading; and small, supportive learning environments—because, in order to solve the achievement gap in reading and eradicate the problem of functional illiteracy for all students, supplementary programs such as EBL must be supported by strong evidence of effectiveness.

The Case for Vocabulary Instruction

Word knowledge, or vocabulary, and “reasoning in reading” were first suggested by Davis (1942) as the two most important, independently operating processes involved in reading comprehension. He asserted that these processes comprised 89% of the variance in reading comprehension, with word knowledge being the greater of the two factors. The literature continues to describe the strong correlation between vocabulary knowledge and reading comprehension. It is difficult to prove causation between a large oral vocabulary and strong reading comprehension skills because the two processes both hinge on meaning-making, albeit at different levels of syntax. Nonetheless, the National Reading Panel (National Institute of Child Health and Human Development, 2000) asserted that even without a significant body of empirical evidence, there is reason to believe that stronger receptive vocabularies can effect greater reading comprehension. To that end, in their discussion of the five key elements of effective reading instruction—phonemic awareness, phonics, fluency, vocabulary, and comprehension—vocabulary instruction is paired with, and discussed first, in their chapter titled “Comprehension.”

The Vocabulary Gap

Children from wealth have typically been exposed to significantly more words and more complex vocabulary through both conversation and picture book texts, creating a critical vocabulary gap that is evident before students start kindergarten. A common estimate is that by the time they enter kindergarten, children from wealthy homes are exposed to 30 million more words than children growing up in poverty (Hart & Risley, 2003). Differences in the size of children's vocabulary as early as 18 or 24 months of age have been correlated to socioeconomic status (Farkas & Beron, 2004; Fernald, Marchman, & Weisleder, 2013; Weisleder & Fernald, 2013). By the age of 24 months, children from high SES households have been found to be six months ahead of children from poverty with regard to language processing skills that are directly related

to vocabulary acquisition (Fernald et al., 2013). These differences have been found to be the result not only of the quantity of exposures, but also the quality of verbal interactions between caregiver and child and the degree of language processing involved in those interactions. Overheard or indirect speech is qualitatively inferior to child-directed speech, the latter of which is more prevalent in higher income and professional households.

Significant vocabulary gaps that are present at 36 months between Black and White students and poor and wealthy students have been found to persist through age 13 (Hart & Risley, 2003). The research is contradictory about whether the gap continues to widen over the course of the school years (Hart & Risley, 2003; Pullen, Tuckwiller, Konold, Maynard, & Coyne, 2010) or whether vocabulary growth is fairly comparable for children from different economic and racial backgrounds (Farkas & Beron, 2004), effectively leaving the size of the gap intact. Regardless, the instruction students are receiving in school is not effectively closing the vocabulary gap.

The Importance of Early Oral Vocabulary

Children need to have a strong oral vocabulary as they learn to read. As they begin to decode words, they need to be able to recognize those decoded letter strings as familiar words. “When the word is not in the learner’s oral vocabulary, it will not be understood when it occurs in print” (National Institute of Child Health and Human Development, 2000, p. 4). Vocabulary, therefore, represents the medial ground between decoding and comprehension. Having a strong vocabulary allows a child to more readily self-check in the decoding stages of reading, and then also to make meaning of what is read.

Once a student makes the transition from learning to read to reading to learn, vocabulary continues to play an important role. It is estimated that in order to adequately distill meaning from a text, the reader must have command of 90 to 95% of the words in the text (Hirsch, 2003). Knowing the vast majority of the words in the text allows the

reader to comprehend the overall meaning of the text and make appropriate guesses about unknown words. When vocabulary skills do not match the demands of the text, readers may be able to accurately decode the text, but will not understand it. This phenomenon has been suggested as a reason for the growing gaps in reading achievement that become apparent around 4th grade (Chall, Jacobs, & Baldwin, 1990; Hattie, 2009), as text become more complex and students with poor vocabulary can no longer rely primarily on strong decoding skills. Having a schema for both the vocabulary and the text’s context is critical to text comprehension.

Vocabulary Acquisition and Instruction

Young children tend to gain their vocabulary knowledge incidentally, through conversation and storybook listening. Even once schooling begins, the vast majority of words that students learn happen incidentally. For those students whose early experiences do not include vocabulary-rich exposures, the challenge for schools becomes finding the best strategies to boost their vocabularies so that both learning to read and reading to learn happen successfully. The National Reading Panel (National Institute of Child Health and Human Development, 2000) suggested that the actual kind of vocabulary instruction undertaken is less important than that we intentionally and frequently engage in vocabulary instruction. Elleman et al. (2009) also concluded that the type of vocabulary instruction used is less relevant than the fact that vocabulary instruction takes place: “no matter what type of vocabulary instruction was used, it produced the same effects on comprehension as any other type of vocabulary instruction” (p. 25). This finding was also supported in a study of 3rd grade classrooms, where the amount of vocabulary instruction was quantified across all parts of the literacy instructional block. Those teachers who incorporated vocabulary instruction throughout the block—instead of only during the specific vocabulary or guided reading lesson—were found to have increased low income students’ vocabulary knowledge significantly (Carlisle, Kelcey, & Berebitsky, 2013). Likewise, the overall strategy, “vocabulary instruction”—not a specific

kind of vocabulary instruction—was found to have the highest effect size of the five pillars of reading instruction in Hattie's (2009) synthesis of meta-analyses related to student achievement.

Regardless of the kind of instruction, key elements do seem to exist. They include multiple exposures, rich contexts, repetition, high engagement, provision for student discussion, storybook reading and read-louds, and a variety of instructional methods (National Institute of Child Health and Human Development, 2000). Rich vocabulary instruction, also known as robust vocabulary instruction, is an approach that incorporates most of these elements and has been suggested as an effective means of boosting the word knowledge of students with low initial vocabularies (Beck & McKeown, 2007). In this form of explicit instruction, children are exposed to new vocabulary words through multiple exposures in rich contexts, and are asked to manipulate those words through discussion and other meaningful activities. Studies of the effectiveness of this approach have found that children with reading difficulties and/or low initial vocabularies learn new words at a greater rate using this explicit instruction over incidental exposures (Elleman et al., 2009; Elley, 1989; Nelson & Stage, 2007; Pullen et al., 2010; Vadasy, Sanders, & Herrera, 2015). Few effects have been seen on distal (norm-referenced) measures of vocabulary or reading comprehension, as it is hypothesized that those measures are not sensitive enough to find the differences in vocabulary caused by targeted instruction (Elleman et al., 2009; National Institute of Child Health and Human Development, 2000). While teacher-made criterion-referenced measures did show significant increases in vocabulary knowledge, this difference in measures also speaks to the enormity of the vocabulary gap problem that teachers and schools must tackle. Frequency, duration, and intensity of the instruction are likely key components of successfully increasing vocabulary knowledge to a great degree.

Making Meaning Vocabulary Curriculum

Because of the significant gap in vocabulary skills associated with weaker readers, the school district determined that a vocabulary component would be required in the Extending the Bridges of Literacy program. *Making Meaning* is a comprehensive reader's workshop curriculum developed by the Center for the Collaborative Classroom, a nonprofit educational organization that provides curriculum materials and professional development around early literacy and mathematical learning. Curriculum kits include read-alouds for whole group instruction, a vocabulary lesson for each day of the week related to the read-aloud, and a classroom set of leveled text that are highly engaging. Reading comprehension and vocabulary lessons complement one another and are unified through a series of pre-selected read-alouds. The district has made the reading comprehension aspect optional, but requires the read-aloud and vocabulary instruction to be included in each EBL lesson. In the introduction to the *Making Meaning* vocabulary program, the authors list seven different components of the vocabulary program that have been gleaned from some of the research on children's vocabulary development. They rely primarily on the work of Beck, McKeown and Kucan; Buaman and Kame'enui; and Stahl in their selection of fundamental underpinnings of the program. The seven components are:

- Provide explicit instruction in a set of carefully chosen, high-utility words.
- Begin instruction by introducing a word in context.
- Provide a student-friendly definition of the word and examples of the way it is used
- Give students the opportunity to engage actively with the word in meaningful ways when they first encounter it, such as applying it to their own experiences.
- Have students practice using the word through engaging activities.
- Provide multiple exposures to the word over an extended period of time.
- Teach strategies that students can use to learn words independently, such as recognizing

synonyms, antonyms, and words with multiple meanings, and using context to determine word meanings. (Center for the Collaborative Classroom, 2015, p.xii)

These seven elements of the program are clearly situated within the seminal work around vocabulary development and reading comprehension. The expectation is that 102 vocabulary lessons taught from this curriculum will provide a substantial boost to the students' vocabulary knowledge.

Extended Time for Learning

The EBL program is designed to provide students with three hours of additional literacy instruction per week for 34 weeks. During this time, students receive direct instruction in vocabulary through the aforementioned *Making Meaning* curriculum. The remainder of the time is to be a teacher-designed combination of review of skills and concepts covered during regular classroom instruction and independent reading in appropriately leveled texts. Teachers are encouraged to conference with students about their reading and to facilitate opportunities for students to discuss their books with one another. The proportion of time spent on various activities is dependent upon the EBL teacher, who, in many—but not all—cases also serves as the students' Tier 1 reading teacher. (In the ideal situation, the EBL and classroom teacher is the same individual, allowing for more efficient recognition of student needs and coordination between what happens during the day and what happens after school. It also helps to strengthen relationships that are already in place.) In addition to the extended time for literacy, students have 30 minutes per day (the program runs three days per week) of snack and recess, some of which is structured for the primary-aged students.

Allocated Versus Engaged Learning Time

Time for learning is one of the three big issues identified by *A Nation at Risk* in need of reform in the country's public schools. In that report, a correlation was drawn between the lower test

scores of American students and fewer hours spent in school, compared with students from leading industrialized nations. This correlation then prompted the assumption that students will learn more if they have more time in school. Instructional time has been a policy issue that has recurred periodically, paired with perceived crises in the quality of educational outcomes achieved by US public schools. In 1994, the National Education Commission on Time and Learning reported that the country had made significant strides in addressing standards and expectations, but that no progress had been made in increasing the amount of time students spent learning. In 1999, WestEd (Aronson, Zimmerman, & Carlos, 1998) released a study asserting that no empirical data or longitudinal studies yet existed that examined the effects of lengthening instruction time on student learning. They exposed a weak link between allocated time (number of days in the school year, number of hours in a day) and student learning. Time was found to be a factor only to the extent that what is available is used effectively—in the service of academic learning: “The research suggests that the higher the quality of instruction, especially as it accommodates students' differing educational backgrounds, abilities and learning styles, the greater the academic achievement” (Aronson et al., 1998, p. 4). Karweit (1985) similarly found that not even time-on-task (also called engaged learning) has a causal relationship with learning. Rather, the key to student success is the degree to which teachers differentiate instruction by readiness and interest such that students are actively engaged in learning activities that appropriately challenge them. The WestEd group cautioned that schools considering extending school time would do well to first analyze the degree to which time is already effectively used. Only if it is determined that there is already a high percentage of engaged learning time should additional time for learning be considered as an intervention strategy.

Characteristics of Effective After-School Programs

After-school programs have long been seen as a solution to the failure of major American

institutions (the family and schools) to properly supervise, support, and ensure the safety of low income children (Lauer, Wilkerson, Apthorp, & Snow, 2006). Academic remediation or acceleration became a new goal of after-school programs in the 1990s, as schools experienced a more urgent need to adequately ensure all students achieved at equal levels (Fashola, 1998). In his early review of after school and extended school day programs, Fashola (1998) described the difficulty in analyzing the effectiveness of the programs in terms of academic results for at-risk students: diversity of programming, non-at-risk populations served, variance in attendance policies, and lack of methodologically sound evaluation procedures.

Given the goal of many after-school programs (including EBL) to improve academic outcomes for students at risk of learning problems or failure, programs need to be evaluated with these specific student populations. Fashola (1998) identified features of 34 programs he reviewed with the greatest promise of positive results for at-risk students. For academic components to be effective, the curriculum of the after-school program should be closely aligned with that of the regular school day. In addition, effective teachers should be retained to teach in the after-school program and time should be allotted for some one-on-one tutoring between teachers and students. In a later meta-analysis of after-school programs targeting reading, the presence of individual tutoring was found to be one of the most positive moderating effects on student achievement in reading (Lauer et al., 2006). Staff training and a structured program with accompanying curriculum materials tend to have better outcomes for at-risk students. Finally, evaluation should be embedded within the program, and community and student groups should be involved in identifying needs and planning to meet those needs.

Expanding upon Fashola's work, Lauer et al. (2006) described several other elements of effective after-school academic programs. In their meta-analysis of 35 out-of-school-time programs, they found that interventions targeting primary-aged

students (K-2) had a greater impact than those targeting upper elementary students (3-5). Activity focus was not a significant moderator of effect size in the Lauer et al. study. In other words, students could participate in activities other than those targeting literacy explicitly and still make statistically significant gains in reading achievement over the control group. Some researchers advocate providing students with activities that do not follow the mold of the traditional school day, particularly for upper elementary and middle school students from minority and/or at-risk populations (Hall, Yohalem, Tolman, & Wilson, 2003; Miller, 2003). Instead, students should have more opportunities to choose activities that promote leadership, collaboration, and problem-solving, all foundational skills to success in school. With regard to amount of time, students benefitted most when the intervention classroom was greater than 45 hours and less than 210 hours for the school year (Lauer et al., 2006).

Lauer et al. (2006) caution that while modest effect sizes can be achieved with after-school literacy programs for at-risk students, the effects from these programs themselves are not likely adequate for closing the achievement gap between at-risk and on-grade-level students. However, others have found that when at-risk students participate in after-school enrichment programs, they have better social and academic outcomes, even two years after participation (Miller, 2003). Specifically, in a study of at-risk third graders, Posner and Vandell (as cited in Miller, 2003) found that "[t]ime in enrichment activities was associated with better grades, work habits, adjustment, and relationships with peers, while time with adults was associated with improved conduct ratings by teachers and better grades in school" (p. 48). These "soft skills" are complementary to academic skills, and equally critical to student success.

Relationships and Belonging

While many of the researchers investigating the links between time and learning focus on the quality of the instruction as it meets the needs of individual learners, other factors of Out of School

Time (OST) programs have been found to benefit students, particularly those at risk of learning failure. The National Institute on Out of School Time (Hall et al., 2003) suggests that the quality of the relationships between individuals is another significant factor in the ability of after-school programs to increase student achievement:

They also need personal attention; strong, respectful relationships with adults; a culture of peer support, clear rules, high expectations and real assessments; and challenging experiences and opportunities for self-direction, participation and contribution within the organization and the community. (Hall, Yohalem, Tolman, & Wilson, 2003, p. 21)

Supportive environments are critical to student success not only in after-school programs, but in all formal school settings. Much of the research on the connection between relationships and learning has focused on the affective aspects of learning, or student habits of mind influenced by those relationships. When students experience supportive, caring high-quality relationships with adults at school, they have a stronger connection to school, motivation to succeed, pro-social values and behaviors, and perseverance in learning and life tasks (Hall et al., 2003; Miller, 2003; Werner & Brendtro, 2012). This “connectedness,” thus, is a key element of future success in school and beyond. While some students come to school already pre-disposed to be connected or find a trusting adult, for other students, that connection must be intentionally made for them.

In addition to a positive effect on student motivation and attitude toward schooling, there is also evidence that strong relationships with teachers are correlated with increases in reading achievement for typically developing elementary-aged readers. In a study of the effects of both the quality of relationships and quantity of instructional exposures in reading and math, Pianta et al. (2008) suggested that positive emotional relationships between teachers and students “matter somewhat” when it comes to reading achievement for 3rd and 5th grade

students (p. 388). Using the data from their earlier NICHD Study of Early Child Care, where 1,364 children from 10 different states in the country were followed from birth through 5th grade, Pianta et al. noted that for every one point gain in emotional climate, 3rd graders outscored national reading growth norms by 1.6 points, while 5th graders outscored norms by 3.7 points. These gains were realized, even after controlling for poverty level, gender, or baseline reading levels. The authors posit that the non-experimental field study they conducted provides evidence that improving the emotional quality of classroom interactions will cause, to some extent, greater achievement gains in elementary-aged students. Hattie (2009) also suggests that there are some significant academic effects created by supportive environments. Strong interpersonal relationships between students and teachers have an effect size of $d = 0.72$, suggesting that the small, focused environment that allows for deeper relationships in a less formal setting may also help to boost student achievement.

It has been conjectured that connectedness through strong relationships can more easily be established when class sizes are small (Miller, 2003). Teachers are more likely to have more time to get to know their students informally and to become familiar with their learning preferences and areas of strength and weakness. Further, smaller classes afford students more opportunities to engage and discuss with peers and for teachers to provide individual attention to students. They also promote better peer relations and sense of belonging within the group (National Institute on Student Achievement, Curriculum, and Assessment, 1998). Smaller group sizes can foster shared goals and positive experiences around learning, facilitating a group identity characterized by positive orientation to school and greater academic achievement. Said differently, group cohesion, created through a focus on a common task or goal, has an effect size of $d = 0.53$ (Hattie, 2009). Cohesion is often found to be stronger in smaller groups, such as those used in EBL. Morrison and Connor (2002) posit that schooling effects are strongest on early literacy when teachers can take an individualized approach to

literacy instruction, based on students' initial vocabulary and decoding skills. They found that 72% of literacy instruction tends to involve child-managed activities, such as sustained silent reading, but that students who enter school with weaker literacy skills require more teacher-managed instruction. Morrison and Connor suggest that designing the optimal balance between teacher-managed instruction and child-managed instruction for each individual student will produce the greatest gains in literacy. While class size has a more distal effect on student learning than teacher instruction, teachers are better able to attend to individual needs when they are instructing smaller groups of students.

The theory of action for EBL posits that strong relationships should be forged between students and teachers in order to connect students, not just to EBL, but to school in general. The initial goal was for all students in EBL to have their classroom teacher also be their after-school teacher. Spending time on activities more individually aligned to student needs and interests in a more relaxed environment that promotes informal conversation and relationship-building was intended to increase the student's connection to his or her teacher and to the learning (reading) process. While not all students were able to be matched with their classroom teachers after school, EBL theory rests on the research that suggests that a connection with any meaningful adult in school will have positive benefits for students' learning trajectories. It also subscribes to the idea that the smaller group setting will allow for greater access to individualized, more meaningful and potent instruction for students at risk of learning failure.

Conclusion

Ensuring that all students master the literacy skills necessary for a self-actualized, productive life characterized by economic and social freedom is the key mission of elementary schools. When the time and resources available during the school day prove inadequate for some students, schools must look for other solutions to closing the reading achievement gaps. The EBL program has been launched at seven

different elementary schools across Charlottesville City Schools in order to address this problem. While there are similar structures in place at each school—time allocated, class size limitations (maximum of six students per teacher), vocabulary and read-aloud activities provided, snack, recess, and transportation provided—there is also significant variation in the ways that the program is implemented. Variations occur both between and within schools, depending on the teachers, their access to real-time data about their students, and the professional decisions they make about what the students need each week. The program's design is supported by theoretically sound, evidenced-based practices. While the specific kind of vocabulary instruction may not be important, the fact that students receive specific vocabulary instruction has research behind it to support improved comprehension and reading fluency. Additional time for instruction, assuming that the majority of instruction during the day is already used for academic learning, should benefit students. Given the lack of evidence that more time promotes more learning however, this is one variable that requires analysis of the opportunity cost associated with running this program three days a week for an additional 1.5 hours. Finally, the ability to forge closer, stronger, more positive relationships with teachers and peers in an informal setting, has the potential to improve students' habits of work, dispositions toward school, and academic achievement.

References

- Annie E. Casey Foundation. (2014). *Early reading proficiency in the United States*. Retrieved from http://www.aecf.org/m/resourcedoc/AECF-Early_Warning_Full_Report-2010.pdf
- Aronson, J., Zimmerman, J., & Carlos, L. (1998). Improving student achievement by extending school: Is it just a matter of time? Retrieved from http://www.wested.org/online_pubs/po-98-02.pdf

- Beck, I. L., & McKeown, M. G. (2007). Increasing young low-income children's oral vocabulary repertoires through rich and focused instruction. *The Elementary School Journal*, 107(3), 251–271. <https://doi.org/10.1086/511706>
- Carlisle, J. F., Kelcey, B., & Berebitsky, D. (2013). Teachers' support of students' vocabulary learning during literacy instruction in high poverty elementary schools. *American Educational Research Journal*, 50(6), 1360–1391. <https://doi.org/10.3102/0002831213492844>
- Center for the Collaborative Classroom. (2015). *Making meaning* (3rd ed.). Emeryville, CA: Developmental Studies Center.
- Chall, J. S., Jacobs, V. A., & Baldwin, L. E. (1990). *The reading crisis: Why poor children fall behind*. Cambridge, MA: Harvard University Press.
- Charlottesville City Schools. (2011). Charlottesville City Schools 2011-2017 Strategic Plan. Retrieved from http://charlottesvilleschools.org/wp-content/uploads/2015/06/CCS_Strategic_Plan.pdf
- Davis, F. B. (1942). Two new measures of reading ability. *Journal of Educational Psychology*, 33(5), 365–372. <https://doi.org/10.1037/h0053582>
- Elleman, A. M., Lindo, E. J., Morphy, P., & Compton, D. L. (2009). The impact of vocabulary instruction on passage-level comprehension of school-age children: A meta-analysis. *Journal of Research on Educational Effectiveness*, 2(1), 1–44. <https://doi.org/10.1080/19345740802539200>
- Elley, W. B. (1989). Vocabulary acquisition from listening to stories. *Reading Research Quarterly*, 24(2), 174–187.
- Farkas, G., & Beron, K. (2004). The detailed age trajectory of oral vocabulary knowledge: Differences by class and race. *Social Science Research*, 33(3), 464–497. <https://doi.org/10.1016/j.ssresearch.2003.08.001>
- Fashola, O. S. (1998). *Review of extended-day and after-school programs and their effectiveness. Report No. 24*. Baltimore, MD.
- Fernald, A., Marchman, V. A., & Weisleder, A. (2013). SES differences in language processing skill and vocabulary are evident at 18 months. *Developmental Science*, 16(2), 234–248. <https://doi.org/10.1111/desc.12019.SES>
- Hall, G., Yohalem, N., Tolman, J., & Wilson, A. (2003). *How afterschool programs can most effectively promote positive youth development as a support to academic achievement*. Boston, MA.
- Hart, B., & Risley, T. R. (2003). The early catastrophe. *American Educator*, 27(4), 6–9. Retrieved from <http://www.isites.harvard.edu/fs/docs/icb.topic1317532.files/09-10/Hart-Risley-2003.pdf>
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. New York, NY: Routledge.
- Hirsch, E. D. (2003). Reading comprehension requires knowledge—of words and the world. *American Educator*, Spring, 10–45. Retrieved from http://www.aft.org/pdfs/americaneducator/spring2003/AE_SPRNG.pdf
- Karweit, N. (1985). Should we lengthen the school term? *Educational Researcher*, 14(6), 9–15. <https://doi.org/10.3102/0013189X014006009>
- Lauer, P. A., Wilkerson, S. B., Apthorp, H. S., & Snow, D. (2006). Out-of-school-time

- programs : A meta-analysis of effects for at-risk students. *Review of Educational Research*, 76(2), 275–313.
- Miller, B. M. (2003). *Critical hours: Afterschool programs and educational success*. Brookline, MA. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20430930>
- Morrison, F. J., & McDonald Connor, C. (2002). Understanding schooling effects on early literacy: A working research strategy. *Journal of School Psychology*, 40(6), 493–500. [https://doi.org/10.1016/S0022-4405\(02\)00127-9](https://doi.org/10.1016/S0022-4405(02)00127-9)
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidenced-based assessment of the scientific research literature on reading and its implications for reading instruction*. NIH Publication No. 00-4769. Washington, DC.
- National Institute on Student Achievement, Curriculum, and Assessment. (1998). *Reducing class size: What do we know?* Washington, DC. Retrieved from <http://www.cea-ace.ca/publication/reducing-class-size-what-do-we-know>
- Nelson, J. R., & Stage, S. A. (2007). Fostering the development of vocabulary knowledge and reading comprehension through contextually-based multiple meaning vocabulary instruction. *Education and Treatment of Children*, 30(1), 1–22. <https://doi.org/10.1353/etc.2007.0003>
- Pianta, R. C., Belsky, J., Vandergrift, N., Houts, R., Fred, J., & Vandergrift, N. (2008). Classroom effects on children's achievement trajectories in elementary school. *American Educational Research Journal*, 45(2), 364–397. Retrieved from <http://www.jstor.org/stable/30069451>
- Pullen, P. C., Tuckwiller, E. D., Konold, T. R., Maynard, K. L., & Coyne, M. D. (2010). A tiered intervention model for early vocabulary instruction: The effects of tiered instruction for young students at risk for reading disability. *Learning Disabilities Research & Practice*, 25(3), 110–123. <https://doi.org/10.1111/j.1540-5826.2010.00309.x>
- Vadasy, P. F., Sanders, E. A., & Herrera, B. L. (2015). Efficacy of rich vocabulary instruction in fourth- and fifth-grade classrooms. *Journal of Research on Educational Effectiveness*, 8, 325–365. <https://doi.org/10.1080/19345747.2014.933495>
- Weisleder, A., & Fernald, A. (2013). Talking to children matters: Supporting Methods. *Psychological Science*, 24(11), 2143–52. <https://doi.org/10.1177/0956797613488145>
- Werner, E., & Brendtro, L. (2012). Risk, resilience, and recovery. *Reclaiming Children and Youth*, 21(1), 18–23.
- World Literacy Foundation. (2015). *The economic and social cost of illiteracy: A snapshot of illiteracy in a global context*. Melbourne, Victoria. <https://doi.org/10.1590/S1413-24782004000100002>