

White Paper on Audiobooks and Reading Achievement

This paper provides a review of the literature on audiobooks in K–12 education. The research included in this review is drawn from journal articles, reports, dissertations, and articles found in SAGE Journals, Education Resources Information Center (ERIC), EBSCO database and Google Scholar. All the above-mentioned search engines were searched for identified key words related to audiobooks and reading achievement. Our research yielded a total of 69 articles.

This white paper describes literature on three topics: the link between proficient reading and listening; the benefits of audiobooks for different types of readers; and a review of the growing empirical evidence related to the impact of audiobooks on comprehension and achievement.

The Link Between Proficient Reading and Listening

The literature on literacy highlights the importance of listening for proficient reading. Gough and Turner (1986) identified proficient reading as the product of decoding and listening comprehension. Listening through a read-aloud or an audiobook introduces new vocabulary and concepts, provides a fluent model for students to emulate, and allows students access to literature that they are unable to read independently (Serafini, 2004). Listening has been found to benefit readers in different age groups. For younger children, Hart and Risley (1995) and later Fernald, Marchman & Weisleder (2013) found that there is a “word gap” that exists in children from low-income homes in comparison to high-income homes where children benefit from a higher quantity of spoken sophisticated vocabulary. Daikidoy and colleagues (2005) found that the relationship between listening and reading comprehension becomes stronger after second grade, after students have mastered their decoding skills. Research on older readers in middle and high school has shown that the influence of listening comprehension on variance in reading comprehension continues to grow over time (Catts, Hogan, & Adolf, 2005).

Furthermore, according to the Report of the Commission on Reading, “Listening comprehension in the fifth grade was the best predictor of performance on a range of aptitude and achievement tests

Suggested citation: Elsayed, R., Ringstaff, C., Flynn, K. (2019). *White Paper on Audiobooks and Reading Achievement*. San Francisco: WestEd.

This White Paper was prepared under C-00014127, from Learning Ally. The content does not necessarily reflect the views or policies of WestEd, nor does mention of trade names, commercial products, or organizations imply endorsement.

in high school."(Anderson, Hiebert, Scott & Wilkinson, 1985, p. 40). Given this evidence on the importance of listening comprehension, developing listening ability should not be left to students' natural exposure to vocabulary, but rather it should be developed through deliberate instruction and practice.

The Benefit of Audiobook for Different Types of Readers

The education literature is plentiful with regard to the benefits of audiobooks for different types of readers. Struggling readers, particularly adolescents, school-aged children, and students with impairments and reading disabilities benefit from the use of audiobooks as a scaffolding tool to support reading achievement and enjoyment. In this section, we highlight how audiobooks can support these different types of readers.

Struggling and Reluctant Readers

Audiobooks can be used with adolescent readers to improve their reading fluency, expand their vocabulary, develop their comprehension, and increase their motivation to interact with books (Wolfson, 2008). Furthermore, numerous studies point to the benefit of audiobooks as a remedy for student disengagement with reading (Hartell, 2018; Cahill & Moore, 2016; Gambrell, Palmer, Codling, & Mazzoni, 1996; Wolfson, 2008). Joshi and Aaron (2008) delineated a component model of reading that recognizes the psychological components of reading, including motivation and interest. The authors stipulate that audiobooks remove the constraints of word recognition and decoding and allow young and adolescent readers to engage with texts that interest them. A quasi-experimental study explored the impact of book-rich classroom environments and home rereading with and without audiobooks on first-grade students' reading motivation, comprehension, and fluency. In both treatment conditions, students were introduced to a book sharing activity in the classroom then encouraged to take the books to reread at home two to three times. The treatment group that took audiobooks followed the same procedures of checking out books to reread at home and also took a tape recorder, and audiotape. Students were encouraged to read along with the tape two or three times, either with family or independently. The authors reported statistically significant differences in the daily reading at home with audiotapes condition in comparison to the daily reading at home only in the areas of reading interest, social interaction and behavior with books (Koskinen, Baker, Blum, Bison, Philips, & Creamer, 2000). This finding is important in the context of understanding some of the driving factors for reading achievement. Guthrie and colleagues (2007) confirmed these driving factors when they examined the relationship between achievement, engagement, motivation, and cognitive processes in reading with relevance to classroom contexts. The authors demonstrated that reading motivation predicts growth in reading comprehension.

For struggling readers, audiobooks can be an important component of a comprehensive reading program. For example, Serafini (2004) explained that a great deal of research validates the importance of reading aloud to students, and posits that the act of reading aloud introduces new

vocabulary and concepts, provides a fluent model, and allows students access to literature that they are unable to read independently. This is particularly important for upper elementary, middle school, and high school students. Additionally, Moats (2001) points to the challenges that upper-elementary students with reading difficulties face in accessing grade-appropriate text, which continues into middle and high school. When students cannot read, they do not want to undertake the labored and unsatisfying experience of reading, and thus struggle with vocabulary, sentence structure, text organization, and formal textbook language. Accordingly, audiobooks provide a critical support for repairing and growing their relationship with reading and learning by allowing readers to enjoy and experience literature regardless of their reading ability.

Students with Physical and Cognitive Impairment

Audiobooks provide a pathway for alternative access to literacy which is especially important for readers with physical and cognitive difficulties.

Before their commercial surge, audiobooks had been traditionally used for the blind and visually impaired. As students with visual impairments progress through the grades into upper elementary and middle school years, the demands of reading grow and students are encouraged or taught to supplement their reading of braille with recorded text. Jackson and Presley (2012) explains that audio-supported reading is a powerful means of accessing and making productive use of texts while also emphasizing that audiobooks should be used in an integrated approach to teaching literacy skills. He also cites a meta-analysis on literacy research done by Ferrell, Young, and Cooney (2006) on interventions with blind and visually impaired students in the past 40 years, which found that, despite the advancements made in inclusive placement practices and literacy instruction, the same pedagogical methods being applied today to teach visually impaired children to read are those used in the 1950s. To overcome this stagnation, Jackson and Presley (2012) suggests that learning to listen and the use of braille or print must be brought together under the umbrella of a comprehensive literacy program that creates authentic classroom activities.

Similarly, students with dyslexia benefit from the use of audiobook as it supports readers to access the more demanding texts given to students in the middle and high school years. Moe and Wright (2013), for example, found that when dyslexic students suffer from lower reading frequency, it impacts their ability to read, their vocabulary, and their desire to go to school. The authors examined a study conducted by the Danish Library and Expertise Center for people with print disabilities, and found a positive correlation between dyslexic children's access to and use of accessible digital formats and their reading habits, satisfaction with school, and ambitions for further education.

English Language Learners

Audiobooks can also present opportunities for English learners to engage with their families with literary-rich texts. Such school-home partnerships can significantly affect child learning (Padak & Rasinski, 2006). Skouge, Rao and Boisvert (2007) encourage schools to share bilingual recording of books with parents to provide both a model for parents on how to read aloud to their children and

to also send parents the message that sharing stories and books with their children is a precious gift that will foster in children a love of reading and an attitude for success. Chuang and Wang (2015) also emphasize that listening is a significant and essential source of language input in second language acquisition.

In the next section, we examine the empirical evidence available about the benefits of audiobooks on reading achievement. Our review of the literature indicates that, while limited, there are a number of significant empirical studies that provide evidence of promise about the impact of reading while listening on reading comprehension, achievement, and motivation. We review these empirical studies below.

Empirical Studies on the Impact of Audiobooks

A randomized controlled trial measuring the effect of adding a listening component to literacy instruction found improvements in reading comprehension in ten weeks, and a 33% increase in the rate of learning against the annual expected gain in achievement for that period. The study also found improvement in vocabulary and reading motivation (Flynn, Matlen, Atienza, & Schneider, 2016). The authors suggest that a greater impact on reading achievement may be achieved if a listening component can be added to literacy instruction on a regular basis, both in classrooms and at home.

The U.S. Department of Education's What Works Clearinghouse (WWC) reviewed empirical studies on Read 180, a reading program designed for students in elementary through high school whose reading achievement is below the proficient level (What Works Clearinghouse, 2009). The READ 180 program includes audiobooks with a narrator who models fluent reading and a reading coach who models comprehension, vocabulary, and self-monitoring strategies for successful readers. The WWC review identified seven randomized control trials and quasi-experimental studies that meet the WWC evidence standards with reservations. The seven studies included 10,638 students, ranging from grade 4 to grade 9, who attended elementary, middle, and high schools in Arizona, California, Florida, New York, Ohio, Texas, and Virginia. The studies that were reviewed found potentially positive effects in comprehension and general literacy achievement. The findings affirm that audiobooks can play an instrumental role in literacy instruction programs in elementary through high school.

Similar to the Read 180 program, the Core Knowledge Language Arts (CKLA) literacy initiative included a listening and learning instructional strand that focused on specific topics to build knowledge, vocabulary, and listening skills. CKLA was piloted in 10 public schools in New York City and an additional seven schools throughout the country, including rural and suburban schools. The schools comprised 172 classrooms, 200 teachers, and 4,466 students. The CKLA program views reading as a complex and interconnected process and thus focuses on the mechanics of reading while building essential background knowledge essential to language growth and development. As a result, the program provides a daily listening and learning strand that exposes children to rich and complex texts and engages students in text-based and analytical discussions by making connections

to texts used in classroom activities (NYC Department of Education, n.d.). The results of a three-year longitudinal study showed that CKLA kindergarten to 2nd grade students outperformed their peers in the control school groups on nearly all measures and achieved significantly higher reading achievement. Furthermore, the percentage of students for whom English was a second language ranged from 15-60% (NYC Department of Education, n.d.).

Whittingham and colleagues (2013) studied the impact of the use of audiobooks on struggling readers' skills and attitudes in a school library audiobook club. Their findings indicate that struggling readers' use of audiobooks had a significant positive impact on reading skills and attitudes toward reading. Esteves and Whitten (2011) also found that assisted reading with digital audiobooks improved reading fluency of upper elementary students with reading disabilities, and pointed to the benefits that teachers can promote when using this method in place of sustained silent reading. Furthermore, Milani, Lorusso and Molteni (2010) found in an experimental study that adolescents with dyslexia showed significant improvements in reading accuracy and motivation after using audiobooks for school and leisure reading texts for five months.

Conclusion

Most classroom teachers recognize the nuanced nature of reading comprehension and the influences of many other elements that support or hinder reading. The studies reviewed above highlight the promise of audiobooks when integrated into comprehensive literacy programs on student reading achievement, access, motivation and enjoyment.

Authors and Reviewers

Rasha ElSayed is a Research Assistant in WestEd's STEM program. She received her master's degree in International Comparative Education from Stanford University. At WestEd, she works on research supporting teacher professional development programs in science and program evaluations for a variety of K-12 organizations. Prior to joining WestEd, Ms. ElSayed conducted several formative and summative evaluations with non-profits in the Bay Area such as San Jose State University and Challenge Success at Stanford University. Ms. ElSayed has experience in designing and teaching afterschool curricula that focus on STEM and design thinking in East Palo Alto. She has also done school-based work as a principal in a local high school. In that role, she helped build evaluation capacity and systems to support ongoing measurement and evaluation.

Dr. Cathy Ringstaff is a Senior Research Associate in WestEd's STEM program. In addition to obtaining a doctorate in Educational Psychology from Stanford University, Dr. Ringstaff completed an Ed.S. in evaluation, and was trained as an elementary teacher. She has served as a PI or co-PI on various IES and NSF studies, and has extensive experience conducting research investigating the impact of innovative curricula, including various types of media, on teaching and learning in elementary and middle school classrooms. She has also worked for over a decade evaluating the implementation and impact of informal science curricula at various museums, such as the Lawrence Hall of Science, the Bay Area Discovery Museum, and the Miami Science Museum. She is currently the evaluator of an international project studying embodied cognition in science in informal settings in the US and UK. Before coming to WestEd, she worked for 10 years as lead researcher for the Apple Classrooms of Tomorrow (ACOT) project, and was responsible for conducting research related to technology integration in K-12 classrooms. Dr. Ringstaff has published numerous research papers, presented at conferences, and co-authored *Teaching With Technology: Creating Student-Centered Classrooms*, published by Teachers College Press. She recently published an article about the impact of professional development on K-2 science teaching in the *Journal of Science Teacher Education*.

Dr. Kylie Flynn is a Senior Research Associate in WestEd's STEM program, Flynn leads multiple federally funded randomized controlled trials (RCTs). Her research interest focuses on testing interventions for students at risk for placement in special education. She serves as Co-Investigator on projects funded by the Institute of Education Sciences: 1) an efficacy study of a social-emotional learning intervention at third grade, 2) an efficacy study of a vocabulary intervention at fourth grade, and 3) a continuous improvement study of an early mathematics intervention. Additionally, Flynn has led large contracts with educational companies, such as Scholastic, Newsela, and Age of Learning. Previously, Dr. Flynn worked at Florida State University (FSU)'s Florida Center for Reading Research on several early literacy and mathematics intervention studies funded by IES and the National Institute of Child Health and Human Development. She also taught reading courses to students in FSU's special education teacher preparation program. Prior to her research work, Dr. Flynn worked as a special education teacher for thirteen years in CA and FL. She is also writing a Raising a Reader Handbook for Birth to Three-Year-Olds for the Silicon Valley Community Foundation.

Reference List

- Anderson, R.C., Hiebert, E.H., Scott, J.A., & Wilkinson, I.A. (1985). *Becoming a nation of readers: A report of the Commission on Reading*. Washington, DC: National Institute of Education.
- Cahill, M., & Moore, J. (2017). A sound history: Audiobooks are music to children's ears. *Children and Libraries*, 15(1), 22–29.
- Catts, H. W., Hogan, T. P., & Adlof, S. M. (2005). Developmental changes in reading and reading disabilities. In H. W. Catts, & A. G. Kamhi (Eds.), *The connections between language and reading disabilities* (pp. 25–40). Lawrence Erlbaum Associates Publishers.
- Chuang, L. L., & Wang, C. (2015). Listening enhancement: Converting input into intake. *American Journal of Educational Research*, 3(9), 1091-1097.
- Diakidoy, I. A. N., Stylianou, P., Karefillidou, C., & Papageorgiou, P. (2005). The relationship between listening and reading comprehension of different types of text at increasing grade levels. *Reading Psychology*, 26(1), 55–80.
- Esteves, K. J., & Whitten, E. (2011). Assisted reading with digital audiobooks for students with reading disabilities. *Reading Horizons*, 51(1), 21.
- 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.
- Flynn, K., Matlen, B., Atienza, S. & Schneider, S. (2016). How listening drives improvement in vocabulary and reading comprehension: A study of promise using Tales2go. WestEd. Retrieved from <http://www.readingrockets.org/pdfs/2016WestEdStudy.pdf>.
- Gambrell, L. B., Palmer, B. M., Codling, R. M., & Mazzoni, S. A. (1996). Assessing motivation to read. *The Reading Teacher*, 49(7), 518–533.
- Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7(1), 6–10.
- Guthrie, J. T., & Klauda, S. L. (2015). Engagement and motivational processes in reading. *Handbook of individual differences in reading: Reader, text and context*, 41–53.
- Hart, B., & Risley, T. R. (2003). The early catastrophe: The 30 million word gap by age 3. *American Educator*, 27(1), 4–9.
- Hartell, A.(2018). Audio books' impact on students' reading experiences. (Doctoral dissertation). Retrieved from <https://scholarcommons.sc.edu/etd/4925>
- Jackson, R. M., & Presley, Ike. (2012). Audio-supported reading for students who are blind or visually impaired. *National Center on Accessible Instructional Materials*. Retrieved from <http://aem.cast.org/about/publications/2012/audio-supported-reading-blind-visually-impaired-asr.html>

- Joshi, R. M., & Aaron, P. G. (2012). Componential model of reading (CMR) validation studies. *Journal of Learning Disabilities, 45*(5), 387–390.
- Koskinen, P. S., Blum, I. H., Bisson, S. A., Phillips, S. M., Creamer, T. S., & Baker, T. K. (2000). Book access, shared reading, and audio models: The effects of supporting the literacy learning of linguistically diverse students in school and at home. *Journal of Educational Psychology, 92*(1), 23.
- Milani, A., Lorusso, M. L., & Molteni, M. (2010). The effects of audiobooks on the psychosocial adjustment of pre-adolescents and adolescents with dyslexia. *Dyslexia, 16*(1), 87–97.
- Moats, L. C. (2001). When older kids can't read. *Educational Leadership, 58*(6), 36–40.
- Moe, S., & Wright, M. (2013, July). Can accessible digital formats improve reading skills, habits and educational level for dyslectic youngsters?. In *International Conference on Universal Access in Human-Computer Interaction* (pp. 203–212). Springer, Berlin, Heidelberg.
- NYC Department of Education. (n.d.). The NYC Core Knowledge Early Literacy Pilot [PowerPoint slides]. Retrieved from <https://www.coreknowledge.org/wp-content/uploads/2016/12/CK-Early-Literacy-Pilot-3-12-121.pdf>
- Serafini, F. (2004). Audiobooks and literacy: An educator's guide to utilizing audiobooks in the classroom. New York, NY: Listening Library.
- What Works Clearinghouse. (2009). *READ 180. What Works Clearinghouse Intervention Report*. ERIC Clearinghouse.
- Whittingham, J., Huffman, S., Christensen, R., & McAllister, T. (2013). Use of audiobooks in a school library and positive effects of struggling readers' participation in a library-sponsored audiobook club. *School Library Research, 16*.
- Wolfson, G. (2008). Using audiobooks to meet the needs of adolescent readers. *American Secondary Education, 36*(2), 105–114.