



REL Pacific Ask A REL Response

Literacy
November 2018

Question:

What does the research say about grade 3 reading proficiency as a predictor of future success?

Response:

Following an established REL Pacific research protocol, we conducted a web-based search for resources related to the outcomes predicted by grade 3 reading proficiency. Because previous Ask A REL responses from REL Midwest (cited below) and REL Mid-Atlantic identified the relationship between grade 3 reading proficiency and academic achievement, college retention, college and career readiness, incarceration, and high school dropout, we focused our search on studies that address additional outcomes such as college enrollment, SEL competency development, and economic growth. In the case of the Mid-Atlantic Ask-A-REL response, which did not have a public link available at the time of the request, REL Pacific sent a version to the requestor for their reference.

The sources for this search included ERIC and other federally funded databases and organizations, research institutions, academic research databases, and general Internet search engines (for details, please see the methods section at the end of this memo). We also tried to focus our search on studies in the Pacific and other indigenous contexts for greater relevancy to the Pacific region.

References are listed in alphabetical order, not necessarily in order of relevance. Descriptions of the resources are quoted directly from the publication abstracts. We have not evaluated the quality of references and the resources provided in this response. We offer them only for your reference. Also, our search included the most commonly used research resources, but they are not comprehensive and other relevant references and resources may exist.

Research References

Aber, J. L., Grannis, K. S., Owen, S. & Sawhill, I. V. (2013). *Middle childhood success and economic mobility*. Washington, DC: Center on Children and Families at Brookings.

<https://www.brookings.edu/research/middle-childhood-success-and-economic-mobility/>

From the abstract: “This study uses data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–1999 (ECLS-K) to analyze competencies that children need to master by the end of elementary school, the extent to which they are doing so, what might be done to improve their performance, and how this might affect their ultimate ability to earn a living and their chances of being middle class by middle age. Both academic skills and socio-emotional skills contribute to core competency. We measure core competence at age eleven using five outcomes: math skills, reading skills, self-regulation, behavior problems, and physical health: (1) 62% of children have core competence by the spring of fifth grade, while 38% do not meet the benchmark on one or more of the five measures; (2) Though there are substantial gaps in achievement by gender, race, and socioeconomic status, differences by subgroup decrease in magnitude when we control for demographics and school readiness at age 5; (3) Achievement gaps by race and socioeconomic status widen over the course of elementary school; the gap between black and white children nearly doubles between kindergarten and fifth grade. The paper concludes with a discussion of how middle childhood interventions such as a social emotional learning program or a whole school reform program like Success For All might improve short- and long-term outcomes for low-income children. Preliminary results from the Social Genome Model indicate that such programs might raise annual family income at age forty by four percent--approximately \$2,400 for a family of four. Appended are: (1) Measurement of Core Competence; (2) Overall Success in Middle Childhood by Selected Subgroups; (3) Correlations between Components of Success; (4) Results from Regressions of Core Competence; (5) Change in Gaps in Core Competence, Kindergarten to Fifth Grade; and (6) Results from Regressions of Core Competence with School Readiness at Kindergarten as a Control.”

Feister, L. (2013). *Early warning confirmed: A research update on third-grade reading*.

Baltimore, MD: The Annie E. Casey Foundation. <https://www.aecf.org/resources/early-warning-confirmed/>

From the abstract: “This report underscores the urgency of ensuring that children develop proficient reading skills by the end of third grade, especially those living in poverty or in impoverished communities. A follow up to 2010’s *Early warning: Why reading by the end of third grade matters*, this report supports the link between reading deficiencies and broader social consequences, including how living in poor households and high-poverty neighborhoods contribute to racial disparities in literacy skills in America and how low achievement in reading impacts an individual’s future earning potential.”

Guo, Y., Sun, S., Breit-Smith, A., Morrison, F. J., & Connor, C. M. (2015). Behavioral engagement and reading achievement in elementary-school-age children: A longitudinal cross-lagged analysis. *Journal of Educational Psychology, 107*(2), 332–347.

<https://eric.ed.gov/?id=EJ1061913>

From the abstract: “Using data from the National Institute of Child Health and Human Development’s Study of Early Child Care and Youth Development, this study examined the cross-lagged relations between behavioral engagement and reading achievement in elementary school and whether these cross-lagged relations differed between low-socioeconomic status (SES) and mid- or high-SES students. Students’ behavioral engagement and reading were assessed in preschool, 1st grade, 3rd grade, and 5th grade. Results showed that reading achievement in preschool predicted subsequent behavioral engagement in 1st grade and reading achievement in 3rd grade predicted subsequent behavioral engagement in 5th grade. However, behavioral engagement did not significantly predict later reading achievement. Furthermore, although the relationship patterns between reading achievement and subsequent behavioral engagement were the same across the 2 groups, the strength of relations was stronger for low-SES students.”

Hein, V., Smerdon, B., & Sambolt, M. (2013). *Predictors of postsecondary success*. Washington, DC: American Institutes for Research College and Career Readiness and Success Center.

<https://eric.ed.gov/?id=ED555671>

From the abstract: “The purpose of this brief is to provide information to state, district, and school personnel seeking support to determine whether their students are on a path to postsecondary success. The College and Career Readiness and Success Center (CCRS Center) has received technical assistance requests from a number of states regarding factors that predict postsecondary success, and this brief summarizes and expands on the information shared with these states. Specifically, we summarize early childhood through early postsecondary education research that identifies student skills, behaviors, and other characteristics that predict future academic and workplace success. We have attempted to focus on a variety of measures drawn from readily available data that schools, districts, and states are likely to have. Through this information, policymakers and practitioners can begin to inform the development and validation of factors to identify students who are not on a path to postsecondary success as early as prekindergarten and as late as their senior year of high school. These factors can inform practice and can be integrated into a longitudinal tracking mechanism to identify and monitor individual students who may need additional resources or supports at any point during their schooling. In addition, tracking and measuring factors of success across prekindergarten to early postsecondary education offer a prime opportunity to develop and evaluate systemwide improvement efforts. For example, these data may help identify particular grades, schools, or subgroups of students (e.g., English language learners) that need additional support, enabling both school and district personnel to develop and

monitor the impact of policies, programs, or interventions designed to improve outcomes for targeted groups or for the system in general.”

Lesnick, J., Goerge, R., Smithgall, C., & Gwynne J. (2010). *Reading on grade level in third grade: How is it related to high school performance and college enrollment?* Chicago, IL: Chapin Hall at the University of Chicago. <https://eric.ed.gov/?id=ED517805>

From the abstract: “Learning to read is one of the most important skills in modern society. Not only does reading serve as the major foundational skill for school-based learning, but reading ability is strongly related to opportunities for academic and vocational success. For children, a critical transition takes place during elementary school: until the end of third grade, most students are learning to read’. Beginning in fourth grade, however, students begin ‘reading to learn’. Students who are not reading at grade level by third grade begin having difficulty comprehending the written material that is a central part of the educational process in the grades that follow. Meeting increased educational demands becomes more difficult for students who struggle to read. The study described here uses longitudinal administrative data to examine the relationship between third-grade reading level and four educational outcomes: eighth-grade reading performance, ninth-grade course performance, high school graduation, and college attendance. Using third-grade national percentile rankings on the Iowa Tests of Basic Skills (ITBS) to place a focus cohort of 26,000 Chicago Public Schools (CPS) students into “below” (0–24th national percentile), “at” (25th–74th national percentile) and “above” grade level (75th–100th national percentile) groupings, the authors find correlational evidence that students who were at and above grade level in third grade graduate and attend college at higher rates than their peers who were below grade level in third grade. The results of this study do not examine whether low reading performance causes low future educational performance, or whether improving a child’s reading trajectory has an effect on future educational outcomes. Future research to investigate this question is necessary.”

Miles, S. B., & Stipek, D. (2006). Contemporaneous and longitudinal associations between social behavior and literacy achievement in a sample of low income elementary school children. *Child Development*, 77(1), 103–117. <https://eric.ed.gov/?id=EJ732832>

From the abstract: “This study investigates associations between social skills (aggression and prosocial behavior) and literacy achievement in a sample of low-income children (between 4 and 6 years old when the study began) during elementary school. Results revealed consistent associations between social skills and literacy achievement in the first, third, and fifth grades, but the patterns of the associations were different for aggression and prosocial behavior. While the strength of the association between aggression and literacy achievement increased over the elementary grades, the association between prosocial behavior and literacy achievement decreased. In addition, path analyses revealed that poor literacy achievement in the first and third grades predicted relatively high aggressive behavior in the third and fifth grades, respectively.”

Regional Educational Laboratory Midwest (July 2018). *What does the research say about the relationship between reading proficiency by the end of third grade and academic achievement, college retention, college and career readiness, incarceration, and high school dropout?*

Washington, DC: U.S. Department of Education, Institute of Education Sciences.

<https://ies.ed.gov/ncee/edlabs/regions/midwest/askarel/2018/third-grade-literacy-relationship-other-outcomes.aspx>

Description: The information in this Ask A REL response from REL Midwest represents rigorous research, reviews of existing research, meta-analyses, and/or policy/research briefs. The references and resources have been selected based on date of publication (with a preference for research from the last ten years), source and funding, and accessibility. Below each citation, REL Midwest has included the abstract, or a portion of the introduction, describing the content of the article. This text has been copied directly from the reports when possible to ensure accuracy.

Additional Organizations to Consult

The Campaign for Grade-Level Reading - <https://gradelevelreading.net/>

From the website: “The Campaign is a collaborative effort by foundations, nonprofit partners, business leaders, government agencies, states and communities across the nation to ensure that more children in low-income families succeed in school and graduate prepared for college, a career, and active citizenship. The Campaign focuses on an important predictor of school success and high school graduation—grade-level reading by the end of third grade.”

Methods

Keywords and Search Strings

The following keywords and search strings were used to search the reference databases and other sources:

- "predictor" and "reading achievement" and "elementary students"
- "reading skills" and "economic development"
- "illiteracy" and "economic development"
- “effects of illiteracy”
- literacy and job skills and longitudinal effects
- economic impact of reading achievement
- reading readiness and social emotional competency

Searched Databases and Resources

ERIC, JSTOR database, and Google Scholar

Reference Search and Selection Criteria

REL Pacific searched ERIC and other academic journal databases for studies that were published in English-language peer-reviewed research journals within the last 15 years. REL Pacific prioritized documents that are accessible online, although not all sources may be publicly available. We also prioritized references that provide practical information based on peer-reviewed research for the teachers and leaders who requested this Ask A REL. Methodological priorities and considerations were given to randomized control trials, where possible, followed by meta-analyses, literature reviews, and quasi-experiments. REL Pacific also prioritized studies that with target populations greater than 30 and were longitudinal in nature. As always, REL Pacific first considers studies conducted in the Pacific region or similar contexts, but also included research with generalizable findings.¹ Resources included in this document—including URLs, descriptions, and content—were last accessed in November 2018.

¹ This memorandum is one in a series of quick-turnaround responses to specific questions posed by educational stakeholders in the Pacific Region (American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, Guam, Hawai'i, the Republic of the Marshall Islands, and the Republic of Palau), which is served by the Regional Educational Laboratory (REL Pacific) at McREL International. This memorandum was prepared by REL Pacific under a contract with the U.S. Department of Education's Institute of Education Sciences (IES), Contract ED-IES-17-C-0010, administered by McREL International. Its content does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.