

Lexia® PowerUp Literacy™ Research Summary

Evidence of Effectiveness with Non-proficient Middle School Readers

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Key Findings



- One-third of students who were identified as “non-proficient” on a statewide ELA test in Spring 2017 and used PowerUp for the 2017-2018 school year went on to achieve “proficient” scores in Spring 2018.
- Every 10-minutes per week that students spent using PowerUp’s Comprehension strand was associated with a 5% increase in state test scores on Reading for Information and a 3% increase in scores on Writing.
- Every 10-minutes per week that students spent in PowerUp’s Grammar strand was associated with a 4% increase in state test scores on Writing.

Context

By the end of 8th grade, over 60% of students in the United States fail to meet reading proficiency standards set forth by the US Department of Education and Institute of Education Sciences¹. These English Language Arts (ELA) gaps have negative downstream effects on students’ performance across content areas (including social studies, science, etc.), which require students to read informational texts like textbooks and produce written essays². Non-proficient readers may lack basic word decoding skills (the ability to efficiently map letters onto sounds) and/or language comprehension skills (e.g., academic vocabulary, background knowledge, grammatical awareness, listening comprehension)³.

To support students in grades 6 and above in gaining proficiency in ELA, Lexia® Learning developed the Lexia PowerUp Literacy™ (PowerUp) program. PowerUp is a blended learning program that combines student-driven, online instruction with teacher-delivered lessons and paper/pencil activities in three separate strands: Word Study (addressing

¹ National Assessment of Educational Progress (NAEP). (2018). *NAEP Reading Report Card*. Retrieved from https://www.nationsreportcard.gov/reading_2017/#nation/scores?grade=8

² Schiefele, U., Schaffner, E., Möller, J., & Wigfield, A. (2012). Dimensions of reading motivation and their relation to reading behavior and competence. *Reading Research Quarterly*, 47, 427-463. doi:10.1002/RRQ.030

³ Gough, P.B., & Tunmer, W.E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7, 6-10. doi:10.1177/074193258600700104

decoding skills), Grammar, and Comprehension (which supports both language and reading comprehension). PowerUp addresses the instructional needs of a wide range of students through individualized and systematic instruction, adaptive learning paths within each educational strand and the inclusion of game-like elements to help motivate and engage students. A Beta version of PowerUp launched at the beginning of the 2017-2018 school year, followed by the launch of an enhanced full-release version in early 2018.

Method

This research study took place at a middle school in rural Ohio. This is the only middle school in a small district with two elementary schools and one high school. The district receives approximately \$300,000 in Title I funding. Most students (91%) attending this school are Caucasian, 13% of students have either an IEP or 504 plan, and 15% are Gifted & Talented.

This report is based on data from 33 students⁴ who:

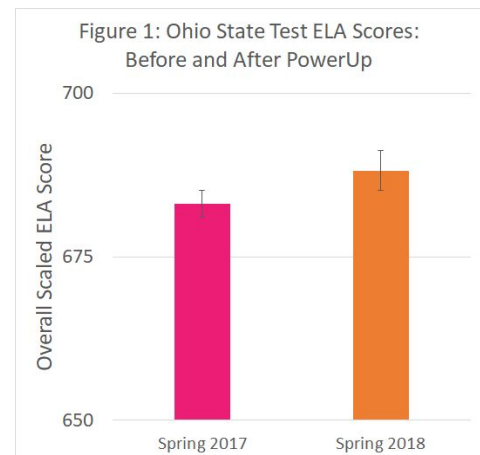
- scored in the “non-proficient” range on the state ELA test at the end of 7th grade (Spring 2017);
- were not flagged as having a disability;
- used PowerUp as 8th graders during the 2017-2018 school year;
- and completed the state ELA test at the end of 8th grade (Spring 2018).

The state ELA test for both 7th and 8th graders examined students’ proficiency in Reading for Information, Reading for Literature, and Writing. Based on their performance in those three domains, students receive one overall ELA scaled score.

Results

These students used PowerUp for an average of 11 weeks. Each week they averaged 23 minutes in the online Word Study strand, 23 minutes in Grammar, and 21 minutes in Comprehension.

Overall, their scaled ELA scores increased by 5.06 points, a statistically significant improvement (see Figure 1)⁵. One-third of students (11 out of 33) improved to a degree such that they no longer scored in the non-proficient range on the ELA state test.



⁴ The entire school had access to PowerUp, but this summary only focuses on the 33 students meeting those criteria.

⁵ Controlling for the possibility of differential race effects, Wilk's $\lambda = .86$, $F(1,31) = 5.02$, $p = .032$, partial $\eta^2 = .139$

Students' time-on-task in PowerUp was related to their performance on the state test. Every 10-minutes students spent in Comprehension each week was associated with a significant 5% increase in their Reading for Information⁶ and 3% increase Writing subscores⁷. Further, every 10-minutes students spent in Grammar each week also associated with a significant 4% increase in Writing subscores⁸.

Implications

These findings provide promising evidence of PowerUp's effectiveness with non-proficient readers. Using PowerUp during the 2017-2018 school year was associated with meaningful gains in students' overall ELA performance. Moreover, the time spent in the Comprehension and Grammar strands of PowerUp was linked to gains in the Reading for Information and Writing subdomains.

In summer 2018, after the conclusion of the study described in this report, Lexia released 7 new levels of PowerUp Comprehension content, along with numerous smaller fixes and updates designed to help students and teachers better chart students' progress. The positive evidence of PowerUp's effectiveness presented in this report, coupled with these program upgrades, offer the potential to further support students in gaining ELA proficiency in the upcoming academic year.

⁶ Controlling for 2017 scores, race, and time spent in the Word Study and Grammar strands, $F(1,27) = 8.26$, $p = .008$, partial $\eta^2 = .234$

⁷ Controlling for 2017 scores, race, and time spent in the Word Study and Grammar strands, $F(1,27) = 4.67$, $p = .04$, partial $\eta^2 = .148$

⁸ Controlling for 2017 scores and time spent in the Word Study and Comprehension Strands, $F(1,27) = 9.90$, $p = .004$, partial $\eta^2 = .268$