

RESEARCH BRIEF

Examining the Impact of Blended Learning on Third Grade Reading Skills

Key Findings

- Following use of Core5, both EL and non-EL third grade students made significant gains in Total Test scores on the GRADE.
- Significant gains were found in Vocabulary Composite scores and Comprehension Composite scores on the GRADE for both EL and non-EL students.
- EL students made greater gains than non-EL students in Total Test scores on the GRADE. Thus, EL students were able to close the reading gap with their peers.

Introduction

The aim of this study was to determine if third- grade students demonstrated gains in reading performance as a result of participating in a blended learning program and to understand if students who are English Learners (EL) and students who are not English Learners (non-EL) performed similarly in the program.¹

Lexia® Core5® Reading. Lexia® Core5® Reading is a blended learning program that supports educators in providing differentiated literacy instruction for students of all abilities in grades preK–5. Core5 provides explicit, systematic, personalized learning in six areas of reading instruction and allows students to independently work through online activities at their own pace. As students work in the program, teachers are provided with real-time data and student-specific offline resources to support student progress. Based on this real-time performance data, Core5 provides a monthly Prescription of Intensity that is specific to each student. This Prescription includes a weekly recommendation for online program use (20–80 minutes per week, depending on a student’s risk level).

Background. Becoming a proficient reader by third grade is a key predictor of future academic and career success, including high school graduation (Fiester, 2013); however, according to the National Center of Educational Statistics (2015), only one-third of elementary students scored Proficient on a national assessment of reading skills, and scores did not improve from 2013 to 2015. Limitations in reading are even more evident for students from low-socioeconomic status (SES) households in which 80% of these students fail to meet reading proficiency milestones (Campaign for Grade- Level Reading, 2014). Similarly, approximately 90% of students who are English Learners (EL students) score below the Proficient level in reading (National Center of Educational Statistics, 2015).

Research has shown that, in terms of basic reading skills such as phonological awareness, letter-sound knowledge, word identification, and spelling, EL students tend to show similar performance patterns as non-EL students (Lesaux, Koda, Siegel, & Shanahan, 2006). One area in which EL students typically underperform relative to their non-EL peers is English oral language proficiency (Geva & Yaghouh Zadeh, 2006). Limitations in English oral language,

¹ This study was presented at the 2017 Conference of the International Society for Technology in Education (ISTE).

particularly vocabulary knowledge, place EL students at a disadvantage when faced with the demands of trying to comprehend more advanced reading materials in older grades (Lesaux, Koda, Siegel, & Shanahan, 2006).

Reading curricula designed for EL students need to take into account individual differences in oral language and reading abilities and provide personalized instruction to meet each student's needs (August, McCardle, & Shanahan, 2014). Blended learning, an instructional approach that has gained popularity in recent years (Horn & Staker, 2011), may be well suited for this purpose. This approach combines teacher-led instruction with the use of digital technology, and prior studies have shown blended learning can meet the needs of diverse groups of students through differentiated instruction and may be particularly beneficial for EL students (Schechter, Macaruso, Kazakoff, & Brooke, 2015).

Sample

Participants were 126 general education third- grade students from an urban elementary school in a low-SES neighborhood in Massachusetts. Twenty-six of the students were identified as EL students, and the remaining 100 were non-EL students. Students' reading skills were pretested and post-tested with the Group Reading Assessment and Diagnostic Evaluation (GRADE™; Williams, 2001).

Method

All students in the study used Core5's online technology and offline materials as part of their ELA curriculum and accessed the online component of Core5 for an average of 62 minutes per week for 30 weeks during the school year. Additional Common Core State Standards-aligned (CCSS) resources were used as part of the ELA instruction.

While the CCSS provided structure for the ELA curriculum (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010), teachers were allowed to use various resources to meet these standards. Teachers were encouraged to use the Daily 5™ framework (Boushey & Moser, 2006), a classroom management program in which

students rotate between five literacy activities while teachers work one-to-one or in small groups with students.

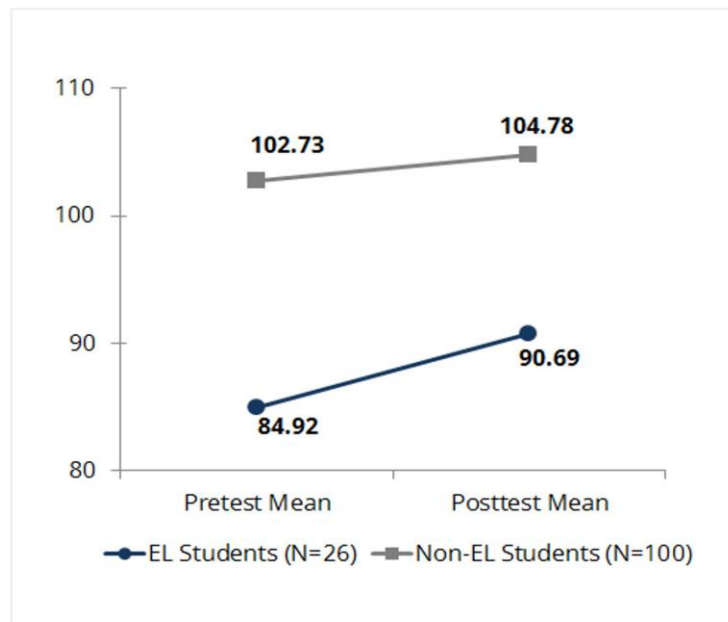
Reading Performance. As an assessment of reading growth, students were administered the GRADE, Level 3 in the fall and spring.

EL Status. EL status was determined by the WIDA™ ACCESS for ELLs (Assessing Comprehension and Communication in English State-to-State for English Language Learners) (WIDA, 2008), which was given in January of the third-grade year.

Results

EL and non-EL third-grade students showed significant gains in Total Test, Vocabulary Composite, and Comprehension Composite standard scores on the GRADE. Importantly, EL students were able to show significantly greater gains in these areas than non-EL students. Non-equivalent gains across groups indicates EL students were closing the reading gap with their non-EL peers but EL students did, however, remain significantly below their non-EL peers.

Total Test. Third-grade students made significant gains from pretest to posttest on Total Test standard scores. The interaction between time and EL status was significant, indicating EL students grew at a significantly greater rate than non-EL students. Overall, EL students did not perform as well as non-EL students, yet both groups ended the school year performing in the average range.



Vocabulary Composite. Third-grade students made significant gains over the school year. Results indicated both groups of students made similar gains from pretest to posttest, with non-EL students scoring higher than EL students.

Comprehension Composite. Third-grade students made significant gains from pretest to posttest. EL students grew at a significantly greater rate than non-EL students, but overall EL students did not perform as well as non-EL students. Post hoc tests revealed EL students performed significantly lower on Comprehension Composite than non-EL students at beginning and end of the school year.

Conclusions

The current study demonstrated both EL and non-EL third-grade students benefited from the successful implementation of a blended learning approach to their ELA curriculum. The blended learning approach is designed to provide differentiated instruction based on students' specific academic needs. The fact that EL students showed greater reading gains than their non-EL peers suggests the blended learning approach offered additional benefits for EL students.

The blended learning approach is based on a comprehensive curriculum including explicit, differentiated instruction, which may have been particularly advantageous for EL students faced with oral language deficiencies. Additional studies are underway, investigating whether continued use of the blended learning approach over multiple years helps shrink the reading gap even further.²

Want to Learn More?

For additional information or updates on research related to Core5, please contact research@lexialearning.com.

² References & statistics are available in a published study that contains these outcomes: <https://goo.gl/RirtgF>

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