

RESEARCH BRIEF

Impact of Core5 and Lexia English on Student Achievement

research@lexialearning.com



Key Findings

- Emergent Bilingual students who used Lexia English on top of Core5 **scored 22 points higher** on the Smarter Balanced English Language Arts (SBAC ELA) assessment than those who only used Core5.
- Emergent Bilingual students who used Lexia English on top of Core5 had a **significantly greater odds of attaining proficiency** on the SBAC ELA assessment in California than those who only used Core5.
- Emergent Bilingual students who used Lexia programs **scored higher** on the overall California English Language Proficiency Assessment (ELPAC) than those who did not use any Lexia products, with the **highest effect size of 0.34 associated with students who used both Core5 and Lexia English.**

Introduction

Between 2010 and 2019, the number of students identified as Emergent Bilinguals¹ rose from 4.5 million to 5.1 million, accounting for approximately 10 percent of students in public schools in the United States ([NCES, 2022](#)). Federal legislation requires states to provide Emergent Bilingual students with equal educational opportunities and assess them in both academic content areas (e.g., English Language Arts and Mathematics) and English Language Proficiency. Lexia Learning developed [Core5® Reading](#) (Core5) and [Lexia® English Language Development](#) (Lexia English) to provide literacy and language support to students. Grounded in the Science of Reading, Core5 focuses on 6 critical areas of reading for students of all abilities in grades K-5: Phonological Awareness, Phonics, Structural Analysis, Automaticity/Fluency, Vocabulary, and Comprehension. Lexia English is designed for Emergent Bilingual students in grades K-6 to support their acquisition of speaking, listening, and grammar skills needed for English proficiency, focusing on students' English language development through academic conversations. Both Lexia programs are adaptive, blended learning programs consisting of an online student-facing program and an offline teacher-led component, as well as robust student reporting.

Prior research has found that Core5 can support Emergent Bilingual students' reading development ([Schechter et al., 2015](#); [Wilkes et al., 2016](#)). A recent study on Lexia English found a positive relationship between Lexia English use and student achievement on the English Language Proficiency Assessment for California or ELPAC ([Feroce, et al., 2022](#)). However, no studies have explored how these two programs can work together to support EB's literacy and language development. With an increasing body of research showing that the development of oral language skills play a crucial role in the acquisition of broader literacy skills ([NASEM, 2017](#)), this study explores how Emergent Bilingual students' use of Lexia English and Core5 relate to literacy and language outcomes as measured by the Smarter Balanced English Language Arts (SBAC ELA) and English Language Proficiency Assessments of California (ELPAC) assessments, respectively.

¹ Lexia uses the term "Emergent Bilingual student" in place of "English Learner" to celebrate the value of bilingualism that these students bring to the classroom and society. In this brief, we use Emergent Bilingual students in lieu of the commonly used terms English Learner (EL) or English Language Learner (ELL).

Study Design

Lexia researchers recruited five districts from California to participate in the study. Each district had experience using Core5 in prior school years and used Lexia English with their Emergent Bilingual students in the 2021–22 school year. We first focus on the impact of using Core5 and Lexia English together for 2,715 Emergent Bilingual students in grades 3 to 5 who took the SBAC ELA assessment in Spring 2022. Scores on the SBAC ELA range from approximately 2000 to 3000. Students who met usage for at least 8 weeks in Core5 were considered Core5 users. Students who used Lexia English for 8 weeks and met their average weekly minutes were considered Lexia English users.² Based on the criteria above, 25% of students were both Core5 and Lexia English users (n=690) and 75% were designated Core5 only users (n=2,025). Table 1 below shows the breakdown of these two groups and overall demographic characteristics.

Table 1: Student Characteristics

	SBAC Subgroup			ELPAC Subgroup			
	Core5 Only	Core5 + LE	Total	None	Core5 Only	Core5 + LE	Total
Avg. SBAC Spr. 22 Score	2377	2399	2383	-	-	-	-
Avg. ELPAC Spr. 22 Score	-	-	-	1496	1501	1511	1503
Avg. ELPAC Spr. 21 Score	1475	1473	1475	1473	1474	1473	1474
% Hispanic	96%	94%	95%	93%	96%	95%	96%
% Spanish at Home	96%	94%	96%	96%	97%	95%	96%
% Female	50%	50%	50%	51%	49%	50%	50%
% Socioeconomically Disadvantaged	88%	89%	88%	93%	89%	90%	89%
% Grade 3	41%	30%	39%	26%	40%	32%	37%
% Grade 4	31%	44%	34%	23%	31%	44%	33%
% Grade 5	28%	25%	27%	51%	29%	23%	29%
<i>n</i>	2,025	690	2,715	162	2,447	705	3,314

² Based on product recommendations, grades K–2 students should use Lexia English for at least 30 minutes per week, on average, and grades 3–6 students should use Lexia English for at least 45 minutes per week, on average.

We also examined the relationship between use of Core5 and Lexia English on the ELPAC. ELPAC scores consist of an overall score and subdomain scores in oral and written language, all ranging from 1150 to 1950. This sample consisted of 3,314 Emergent Bilingual students in grades 3 to 5. We used the same criteria to designate students as Core5 and/or Lexia English users except we decreased the weeks meeting usage and weeks of use to 4 since districts administered ELPAC mid-year. Based on the usage criteria, 74% of students were Core5 only users (n=2,447) and 21% were Core5 and Lexia English users (n=705). We included an additional comparison group of students who did not use any products, accounting for 5% of the sample (n=162).

For both the SBAC and ELPAC analyses,³ we used descriptive statistics, and linear and logistic regressions to examine the relationship between the use of Core5 and Lexia English and student achievement. We standardized students' test scores in the regression analyses and statistically controlled for students' grades, district, prior year ELPAC achievement⁴, gender, and their socioeconomically disadvantaged status. We did not control for students' race/ethnicity or their home language since most students in our samples identified as Hispanic and most spoke Spanish as their home language.

Results

Emergent Bilingual students who used Lexia English on top of Core5 scored 22 points higher on the Smarter Balanced English Language Arts (SBAC ELA) assessment than those who only used Core5.

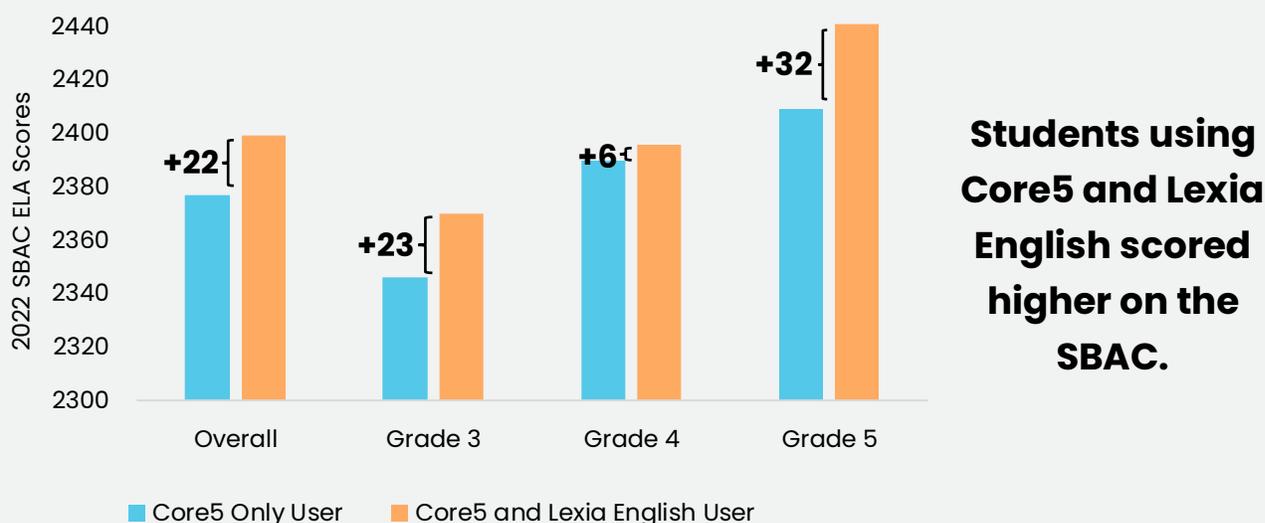
Emergent Bilingual students who used both Core5 and Lexia English scored 22 points higher on the 2022 SBAC ELA than Emergent Bilingual students who only used Core5. This difference was associated with a significant overall effect size of 0.17, suggesting an additive benefit of using Lexia English on top of Core5. Effect sizes help describe the magnitude of the difference between two different groups and allow for comparison of program impact or product effects across studies that use different assessment measures. While an effect size of 0.17 is

³ Baseline equivalence for the SBAC and ELPAC analyses varied across student groups and ELPAC domains depending on the analytic method. We attempt to mitigate any baseline differences by controlling for student characteristics including prior achievement (i.e., ELPAC 2021 scores) in our analyses.

⁴ Due to inconsistent SBAC 2021 administration in California and general lack of SBAC 2021 data, we used students' 2021 ELPAC scores as a prior achievement control for both SBAC and ELPAC analyses.

considered moderate in educational interventions ([Kraft, 2020](#)), this is the additive impact of using Lexia English and Core5 on top of the potential existing benefits of just using Core5.

We found a similar pattern within grades. In grade 3, Emergent Bilingual students using both Core5 and Lexia English scored higher than those only using Core5 by 23 points. Emergent Bilingual students in grades 4 and 5 using both products also scored higher than those only using Core5 by 6 and 32 points respectively, but these differences were not significant. Practically speaking, Core5 and Lexia English users scored higher than the average Emergent Bilingual student in grades 3, 4, and 5 who took the Spring 2022 SBAC ELA in the state of California ([CAASPP, 2022](#)).

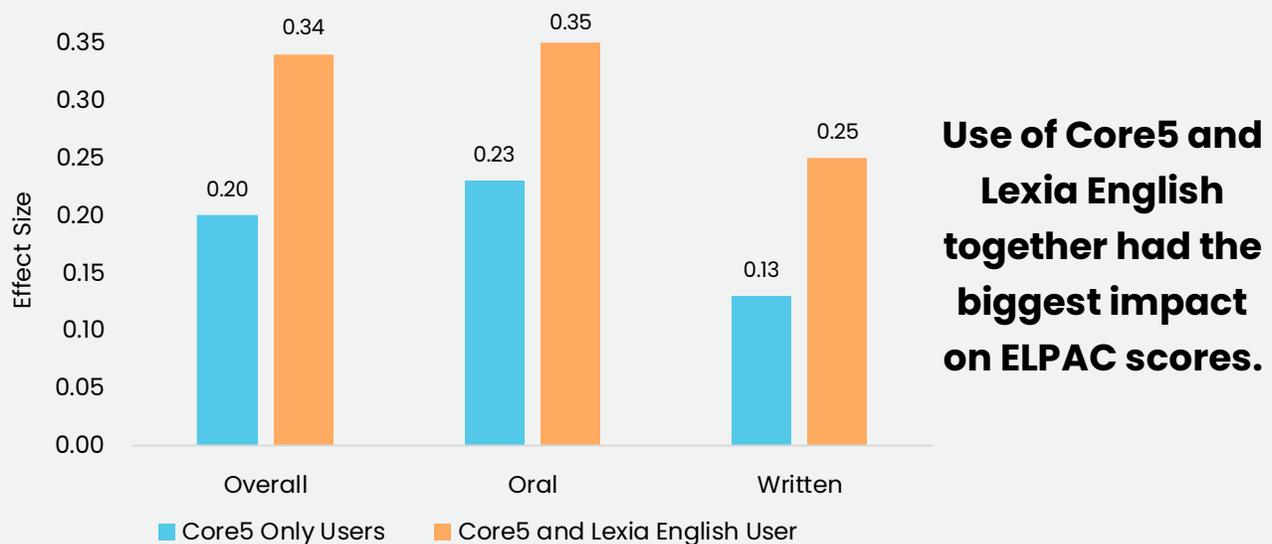


Emergent Bilingual students who used Lexia English on top of Core5 had a significantly greater odds of attaining proficiency on the SBAC ELA assessment in California than those who only used Core5.

Approximately 23% of Emergent Bilingual students who used Lexia English and Core5 (n=160) achieved proficiency on the SBAC ELA assessment compared to only 14% of Emergent Bilingual students who only used Core5 (n=275). Both groups had a higher percentage of students meeting proficiency than the state average of 13% of English Learners across grades 3, 4, and 5 ([CAASPP, 2022](#)).

Emergent Bilingual students who used Lexia programs scored higher on the overall California English Language Proficiency Assessment (ELPAC) than those who did not use any Lexia products, with the highest effect size of 0.34 associated with students who used both Core5 and Lexia English.

Compared to students who did not use any Lexia products, the effect size⁵ of using both Core5 and Lexia English was 0.34 on the overall ELPAC. The effect sizes for the oral and written subdomains were 0.35 and 0.25, respectively. Students who only used Core5 had lower but still positive effect sizes of 0.20, 0.23, and 0.13 on the overall, oral, and written ELPAC compared to students who did not use any Lexia products. All results were statistically significant.



Want to Learn More?

Results from this study underscore the connection between oral language development and broader literacy skills. For more information and updates on research related to Core5 or Lexia English, please contact research@lexialearning.com.

⁵ Effect sizes help describe the magnitude of the difference between two different groups and allow for comparison of program impact or product effects across studies that use different assessment measures. In this case, we compare each user group (Core5 only users or Core5 and Lexia English users) to the *group of students who did not use any Lexia products*.