

Research Brief: Impact of Lexia[®] Core5[®] Reading on English Learners

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Key Findings

- In a national sample, ELs made grade-level gains in Core5 which were slightly greater than non-ELs over the school year.
- ELs using Core5 made greater gains on outside reading measures than non-ELs using Core5 and ELs not using Core5.
- ELs with the lowest language proficiency on WIDA showed large gains on an outside reading measure after two years of Core5 use.
- ELs who reached benchmark in Core5 showed higher performance levels on a summative state assessment than all ELs in the same school district.

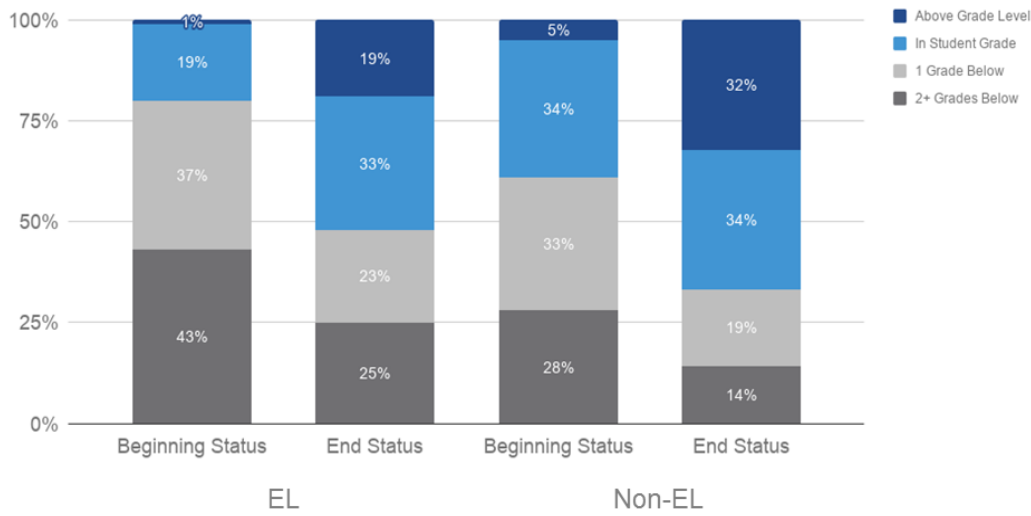
Purpose

Efforts to identify effective reading instruction for English Learners (ELs) are critically important. To highlight the urgency, the number of ELs in the U.S. is projected to increase from 10%¹ in 2015² to 40% in 2030³. Further, 68% of ELs in grade 4 score below U.S. proficiency levels in reading compared to 28% of non-ELs⁴. The long-term effects of under-achieving in reading include poor school performance, increased drop-out rates, lower self-esteem, and reduced earnings⁵. The evidence to date suggests that Lexia[®] Core5[®] Reading (Core5) can help mitigate this crisis. This report reviews research on use of Core5 with ELs.

ELs versus Non-ELs Using Core5

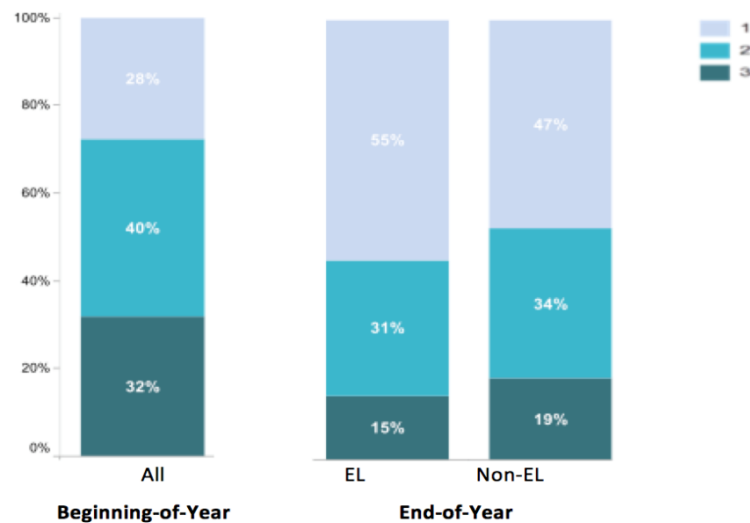
Performance in Core5. ELs made slightly greater gains than non-ELs in Core5 during the school year. Results were obtained from a matched, national sample of 14,008 ELs and 14,008 non-ELs. At the beginning of the school year, 20% of ELs and 39% of non-ELs were working on skills in/above grade level in Core5. Both groups improved over the school year. **ELs showed a 32% improvement** with 52% working on skills in/above grade level at the end of the year, and non-ELs showed a 27% improvement with 66% working on skills in/above grade level at the end of the school year.

Grade-level Gains in Core5 for ELs and Non-ELs



Performance on Outside Reading Measures. ELs using Core5 showed greater gains than non-ELs using Core5 on outside reading measures as demonstrated via multiple academic research studies. For instance, in a large-scale study with matched ELs and non-ELs, Kazakoff et al.⁶ found that ELs made greater gains than non-ELs over the school year on *aimsweb*.⁷ The percent of students in Tier 1 increased from 28% to 55% for ELs and 47% for non-ELs. The difference between ELs and non-ELs was statistically significant in first grade. A study by Brooke et al. found that ELs also significantly outperformed non-ELs in kindergarten.⁸

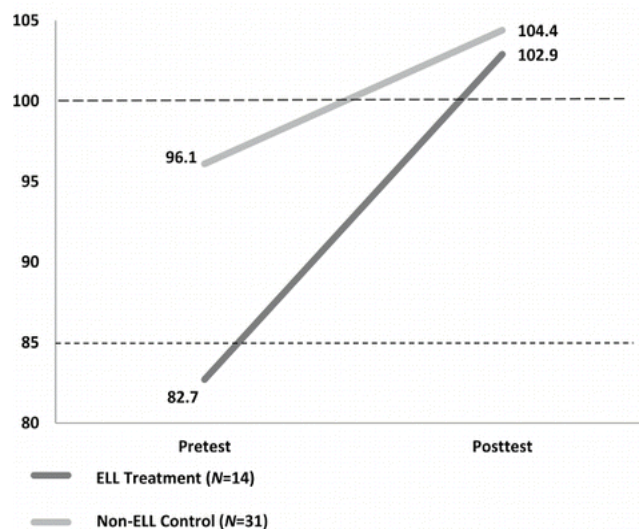
Tier Status on *aimsweb* for Matched ELs and Non-ELs Using Core5



ELs Using Core5 versus ELs not Using Core5

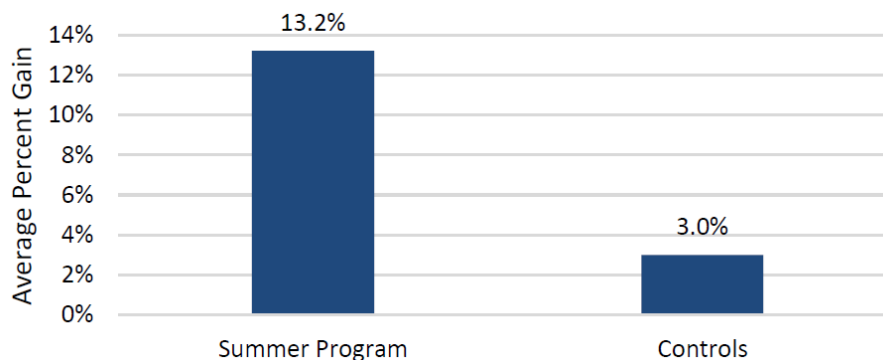
School year growth. In an experimental study Schechter et al.⁹ randomly assigned first and second grade classes to use or not use Core5. ELs in Core5 classes showed large gains on the *GRADE*.¹⁰ Their gains approached statistical significance compared to ELs in control classes and allowed them to close the reading gap with non-ELs. Similar outcomes were reported by Macaruso and Rodman in kindergarten.¹¹

GRADE Standard Scores for ELs in Core5 Classes and Non-ELs in Control Classes



Summer program. In another experimental study Albert et al.¹² randomly assigned ELs to participate or not in a summer program using Core5. The program took place prior to grade 4. Though not statistically significant, ELs in the summer program produced Lexile score gains on the Reading Inventory¹³ four times greater than control students.

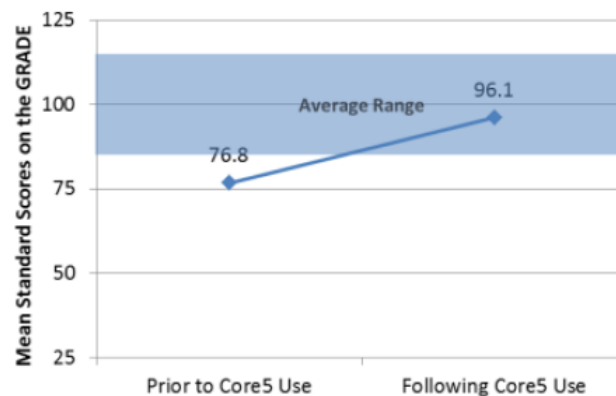
Average Percent Gain for ELs by Group



Low English Proficiency

A subset of ELs with the lowest language proficiency level on WIDA (Level 1 Entering) used Core5 for two years, starting in kindergarten or first grade. As seen in the figure, these students showed large gains on the *GRADE*. Though not statistically significant, their gains (19.3) were greater in magnitude than gains made by ELs with higher proficiency levels (11.8) and non-ELs (12.6) in their grades.

Low English Proficiency ELs



Summative State Assessment

Performance of ELs using Core5 was examined on the *PARCC*¹⁴, a summative state assessment. Of the ELs who reached Core5 benchmark (i.e., working above grade level), 68% obtained scores that “approached”, “met”, or “exceeded” standards on the PARCC. This outcome is statistically significant compared to the percent for all ELs (37%) in the same school district.

Published Studies with ELs

Four Core5 studies on ELs have been published in peer-reviewed journals. Two studies are Strong and two Promising based on ESSA Levels of Evidence. Mean effect size for the two Strong studies is .44, which is considered substantively important for educational interventions.¹⁵

ESSA Levels and Effect Sizes for Published Core5 Studies on ELs			
ESSA Level of Evidence	Studies	Assessment(s)	Mean Effect Size
Strong	2	<i>GRADE</i>	.44
Promising	2	<i>GRADE, aimsweb</i>	N/A

Summary

The research reviewed here demonstrates that Core5 can positively impact the reading performance of ELs. Grade-level gains in Core5 were slightly greater for ELs than non-ELs over the school year. ELs using Core5 made greater gains on outside reading measures than non-ELs using Core5 and ELs not using Core5. ELs with the lowest language proficiency made large gains on an outside reading measure following two years of Core5 use. Finally, ELs who reached benchmark in Core5 achieved significantly higher levels on a state assessment than all ELs in the same school district. Together, these findings indicate that Core5 can serve as an effective tool to support reading skills for ELs.

¹ These values reflect data from public schools only.

² McFarland, J., Hussar, B., Wang, X., Zhang, J., Wang, K. Rathbun, A., & Bullock Mann F. (2018). English Language Learners in Public Schools. In T. Nachazel, W. Smith, and M. Ossolinski (Eds.), *The Condition of Education 2018*. Retrieved from <https://nces.ed.gov/pubs2018/2018144.pdf>

³ Truong, N. (2017, Aug). *Next Generation Learning Models for English Language Learners*. Retrieved from <https://www.inacol.org/wp-content/uploads/2017/06/iNACOL-NGLMELL-02Aug2017.pdf>

⁴ National Center for Education Statistics. (2017). [Tables of 2017 Reading Scores for Grades 4 and 8 by Demographic]. *2017 Reading Grades 4 and 8 Assessment Report Cards: Summary Data Tables for National and State Average Scores and Achievement Level Results*. Retrieved from https://www.nationsreportcard.gov/reading_2017/files/2017_Results_Appendix_Reading_State.pdf

⁵ What's the Impact. (n.d.). In *The Children's Reading Foundation*. Retrieved from <https://www.readingfoundation.org/the-impact>

⁶ Kazakoff, E.R., Macaruso, P., & Hook P. (2017). Efficacy of a blended learning approach to elementary school reading instruction for students who are English Learners. *Educational Technology Research and Development*, 66(2). Retrieved from <https://link.springer.com/article/10.1007/s11423-017-9565-7>

⁷ Pearson Education. (2011). *Aimswest default cut scores explained*. Bloomington, MN: Pearson. Retrieved from: http://www.aimswest.com/wpcontent/uploads/AIMSwest_Default_Cut_Score_Guide.pdf

⁸ Brooke E., Kazakoff, E.R., Macaruso, P., & Prescott, J. (2016). Can a blended learning model of reading instruction support the development of at-risk EL and non-EL students' reading skills in kindergarten? Society for the Scientific Study of Reading Annual Conference.

⁹ Schecter, R., Macaruso, P., Kazakoff, E., & Brooke, E. Exploration of a blended learning approach to reading instruction for low SES students in early elementary grades. *Computers in the Schools*, 32(3-4). doi:10.1080/07380569.2015.1100652

¹⁰ Williams, K.T. (2011). *Group reading assessment and diagnostic evaluation*. Circle Pines, MN: American Guidance Service.

¹¹ Macaruso, P., & Rodman, A. (2011). Benefits of computer-assisted instruction to support reading acquisition in English language learners. *Bilingual Research Journal*, 34, 301-315. doi: 10.1080/15235882.2011.622829].

¹² Albert, J., Bauer, C., Resendez, D., Puente, R.R. and Lexia Research & Analytics. Impact of Core5 in a Summer Program for English Learners. Concord, MA: Lexia Learning Systems LLC, A Rosetta Stone Company.

¹³ Houghton Mifflin Harcourt (n.d.). Meet college and career readiness goals with HMH assessments. Retrieved from <https://www.hmhco.com/programs/reading-inventory/research>

¹⁴ Partnership for Assessment of Readiness for College and Careers. (n.d.). Retrieved from <https://test-guide.com/parcc/>

¹⁵ Lipsey, M. W., Puzio, K., Yun, C., Hebert, M. A., Steinka-Fry, K., Cole, M. W., Roberts, M., Anthony, K. S., & Busick, M. D. (2012). *Translating the statistical representation of the effects of education interventions into more readily interpretable forms* (NCSER 2013-3000). Washington, DC: National Center for Special Education Research, Institute of Educational Sciences, US Department of Education