



Policy Memorandum: Increasing Math Achievement for English Learners Through Family and Teacher Collaboration

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Who We Are

We are educational leaders with a wealth of experience in serving English Learners and families across the state of California. Frances Baez serves as the Local District Central Superintendent serving 78,000 students, 46,875 of which are English Learners in a subset of the Los Angeles Unified School District (LAUSD), the second largest school district in the country. This local district serves the highest concentration of English Learners in LAUSD. Maria Villa serves as the Director of Parent and Family Engagement for the California Association for Bilingual Education (CABE), an organization committed to empowering diverse students, families, teachers, and administrators across the state of California. Both of us strive to intersect student and family needs and statewide leadership to open doors to achievement and self-actualization. We are privileged to be a part of the 2020 National Institute for Latino School Leaders-California (NILSL-CA), a California Fellowship with UnidosUS, that seeks to bridge the divide between policy and practice and effectively train advocates for policies and reform efforts to strengthen outcomes for Latinos.

Summary

Local, state, and national student achievement data demonstrate a persistent gap between English Learners and Non-English Learners (Non-ELs) in math. The National Assessment of Educational Progress (NAEP), California Assessment of Student Performance and Progress (CAASPP), and Fall 2020 grades show that English Learners (EL) are disproportionately performing below proficiency level. In California, there is a new Math Framework adoption on the horizon as well as the creation of a distance learning framework that includes standards for English language development, English language arts, and math. This landscape makes a strong case for establishing funding recommendations for increased engagement and professional development for teachers to close the achievement gap and address EL needs in 2021 and beyond.

The Need

English Learners in California have performed below proficiency in the 4th and 8th grade math section of the National Assessment of Educational Progress (NAEP), with an average of a 26 point percentile difference between ELs and Non-ELs from 1990 to 2019.¹ There is also an 11% difference among ELs and Non-ELs in the 3rd grade Math portion of the California Assessment of Student Performance and Progress (CAASPP).² In a subset of the Los Angeles Unified student population, 48% (or 22,500) of secondary ELs in 6th -12th grade were issued midterm grades of D or F in math in the Fall of 2020. This data analysis supports the need to advance advocacy for intentional supports for English Learners in the upcoming decade.

Research shows that students need specifically designed approaches to acquire math skills. A variety of teaching methods, like Universal Design for Learning (UDL), will offer multiple means of engagement, representation, action, and expression.³ These are the traits ELs need to process and show their learning. Foundational skills in math will address unfinished learning in the early grades to access advanced math in the higher-level grades.⁴ Persistence in math in K-12 will lead to persistence in college and career readiness.

However, the COVID 19 pandemic and distance learning have had a significant impact on the achievement of ELs. At the same time, a new California Math Framework is being revised and published in 2021.⁵ This is a pivotal moment to address unfinished learning, hone in on specific UDL strategies for ELs and prepare teachers for new math initiatives that meaningfully engage all students in tasks that are relevant to their interests. Professional development and planning time will allow for intentional support of math learning while simultaneously acquiring language.⁶ During distance learning, families have been an integral part of their children's education. This era highlights the powerful connection between student achievement and family engagement. Proven approaches to engagement emerge during these unprecedented times.

The California Association of Bilingual Education (CABE) Family, School, and Community Engagement Program is the result of a five-year research project (2006-2011) funded by the U.S. Department of Education. Based on their research, CABE Project 2INSPIRE increases partnerships in schools to increase student academic achievement and, build and establish critical relationships with them. These types of partnerships are essential in supporting the design for workshops and capacity building. In addition, this collaborative process has demonstrated that trainings funded by Title I can propel ELs' achievement by strengthening the instructional practices of teachers working with this student population and their families.

Background

The review of the literature provides an analysis of the achievement gap in math among ELs and Non-ELs at the national, state, and local school levels.⁷ A UDL and Funds of Knowledge approach will develop a better understanding of student assets to enhance classroom practices based on students' strengths. At the same time, culturally and linguistically relevant learning materials offer an igniting entry point for students to engage in learning. Student assets, curricula, and teacher practices will be instrumental in closing the achievement gap for ELs. UDL encompasses three ways for students to acquire and express their learning: engagement, representation, and action with expression. For example, students need to see, hear, and touch what they are learning as a way to stay interested and engaged. Students succeed when they show their learning in multiple fashions, such as presentations, videos, poetry, art, etc. Culturally relevant

learning further establishes the context for learning. Students stay interested and persist when they are learning content that matters most to them.

Currently, students are offered 180-240 state minimum daily synchronous instructional minutes in learning; however, teachers are delivering direct instruction, instead of engaging students in discussion based on math concepts.

At this moment, a review of the California Math Framework is slated for adoption in 2021. Conversations around the adoption provide the context for specifically designed strategies for ELs⁸ and offer multiple pathways for students to achieve deeper learning. Entry points for accelerated and advanced math courses are possible for students through the Framework. This is the time to support early numeracy⁹ and address Master Scheduling in middle and high school to offer English Learners K-12 math opportunities.

The demonstrated need to enhance equity and afford access for K-12, EL's¹⁰ forms the foundation for our recommendations: increase Title I funds from 1% to 3% to provide robust professional development and opportunities for us to support students academically, in particular in math.

The Every Student Succeeds Act (ESSA) supports family engagement by requiring school districts to use at least 1% of their Title I funds for parent and family engagement activities. The funds can be used to support professional development for educators on family engagement, home visiting programs, and other consistent activities to support family engagement. Currently, California receives 1.98% of Title I funds. A 1% allocation of Title I funds is \$19 million; therefore, 3% would be \$57 million, an increase of \$38 million.¹¹

We also recommend that the State of California set up a competitive, one-time grant to encourage start-up partnerships between Local Education Agencies (LEA's) and community organizations to advance implementation of the Math Framework with ELs and their families, creating webinars, small group interactive virtual sessions, or other similar activities. The discretionary state funds from the American Recovery Act may be able to grant \$1 million toward these start-up partnerships.

These recommendations will prepare students and families for the new requirements of the California Math Framework and the policies that will impact students.

Our Ask

English Learners in California have historically underachieved in math at the local, state, and national levels. As we await the adoption of a new Math Framework, we need to prepare teachers and families to engage students in deeper learning and real-world application of math concepts. Based on the research and the dire needs students are facing today, we recommend:

1. Increase the Title I family engagement set-aside from 1% to 3% to support evidence-based family engagement programming geared at math support for English Learners and their families. The increased funding allocation can help train teachers and school partners to work with parents/guardians of English Learners to help support the implementation of the new Math Framework while simultaneously focusing on English language development.
2. Fund a competitive, one-time state grant to encourage start-up partnerships between LEA's and community organizations to advance implementation of the Math Framework with ELs and their families at schools with 20% or more English Learners. The recommended funding source is the discretionary state allocation from the American Recovery Act, currently \$450 million.

Impact

- Family engagement increases overall student academic success. Several studies have found this to be true. For example, teacher outreach to families was related to strong and consistent gains in student performance in both reading and math. The most effective outreach practices included meeting face-to-face, sending materials home, and keeping in touch about progress. Workshops for families on helping their children at home were linked to higher reading and math scores. Schools with highly rated partnership programs made greater gains on state tests than schools with lower-rated programs.¹²
- Now more than ever, families/guardians are their children’s support system and side-by-side teacher at home. Supporting families to help their children is an essential element as students face the challenges of online learning. Families need learning strategies and best practices to support at-home learning. Regular, detailed, and native language communication between families, teachers, and the school is a fundamental element of a successful online learning strategy.
- Professional learning and planning time will allow for intentional support of math learning while language is acquired.¹³ Proven approaches to engagement emerge during these unprecedented times. This is when we need to build capacity in UDL and engagement techniques in distance learning to acquire grade level math skills.
- Planning will also be needed to prepare for after-school tutoring and small group instruction to address unfinished learning experienced during remote learning. This preparation will propel acceleration efforts forward when they can resume.

Endnotes

- 1 The Nation’s Report Card, “NAEP Report Card: Mathematics,” accessed April 2, 2021, <https://www.nationsreportcard.gov/mathematics/states/groups/?grade=8>.
- 2 Brandon Lewis, Melissa Steel King, and Jennifer O’Neal Schiess, “Language Counts: Supporting Early Math Development for Dual Language Learners,” Bellwether Education Partners, October 13, 2020, <https://bellwethereducation.org/publication/language-counts-supporting-early-math-development-dual-language-learners>.
- 3 California Department of Education, “Curriculum Framework and Evaluation Criteria Committee Guidelines for the 2021 Revision of the Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve,” Mathematics Framework Guidelines, 2020, accessed April 2, 2021, <https://www.cde.ca.gov/ci/ma/cf/mathfwcfcguidelines.asp>
- 4 Lewis, Steel King, and O’Neal Schiess, “Language Counts.”
- 5 “Curriculum Framework and Evaluation Criteria Committee Guidelines for the 2021 Revision of the Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve.”
- 6 Ed Trust – West and Californians Together, “Math, Equity, and English Learners in California,” The Education Trust-West, September 9, 2020, <https://west.edtrust.org/math-equity-and-english-learners-in-california/>
- 7 Lewis, Steel King, and O’Neal Schiess, “Language Counts.”
- 8 The Ed Trust – West and Californians Together, “Math, Equity, and English Learners in California.”
- 9 “Unlocking Learning II: Math as a Lever for English Learner Equity,” The Education Trust-West, March 2018, <https://west.edtrust.org/wp-content/uploads/sites/3/2018/03/Ed-Trust-West-Unlocking-Learning-II-Report.pdf#page=5>
- 10 “Unlocking Learning II: Math as a Lever for English Learner Equity.”
- 11 “Fiscal Years 2019-2021 State Tables for the U.S. Department of Education,” The U.S. Department of Education, March 2021, <https://www2.ed.gov/about/overview/budget/statetables/index.html>
- 12 “Unlocking Learning II: Math as a Lever for English Learner Equity.”
- 13 The Ed Trust – West and Californians Together, “Math, Equity, and English Learners in California.”