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Mathematics Beyond the School Day

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“When my first grader asks [for] help in math, I have to tell him, ‘Excuse me’. I go to YouTube [to] teach [myself], and then I go teach him. And that’s how I help him, you know, but I struggle with math, I struggle.”

- Southeast Florida Parent

In the Fall of 2023 we conducted a listening tour across the state of Florida in an effort to understand the current state of mathematics education. This brief reports on what we learned from parents/caregivers and other stakeholders about ensuring students are successful in mathematics. For a comprehensive report of the Listening Tour and our methodology visit bit.ly/LCListingTour.

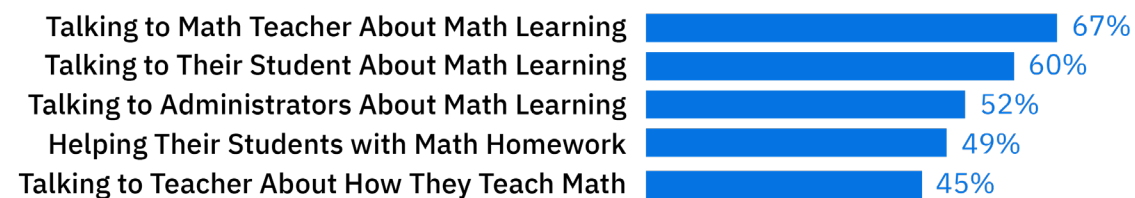
Despite widespread agreement about the importance of mathematics, when asked about what they wanted to see changed in math education, conversations about supporting parents/caregivers at home came up 69 times across 23 different focus group interviews across the state. A frequent point of conversation was the recognition that parents/caregivers struggle to support their student(s) at home. When asked about parent support for students’ mathematics on the survey, less than half of parents indicated that they feel comfortable helping their student with their math homework, suggesting that this is a widespread issue. Other topics that emerged in conversation were that decision-makers should listen to parent/caregiver concerns and that Florida should invest in resources to support parents/caregivers.



Key Finding: Parents Desire Additional Resources to Help Their Children With Mathematics

Teachers and families are an integral part of a child’s education as they matriculate through PK-12 education. When talking with parents, teachers, and other stakeholders, they all described a common goal of ensuring students are successful in mathematics. Depending on one’s career goals, what it means to be successful in mathematics varies, but across all stakeholders, there is agreement that mathematics is important for managing finances responsibly, having better life outcomes, contributing to a competitive workforce and ultimately being able to solve problems requiring novel solutions.

Parents Feel Comfortable...

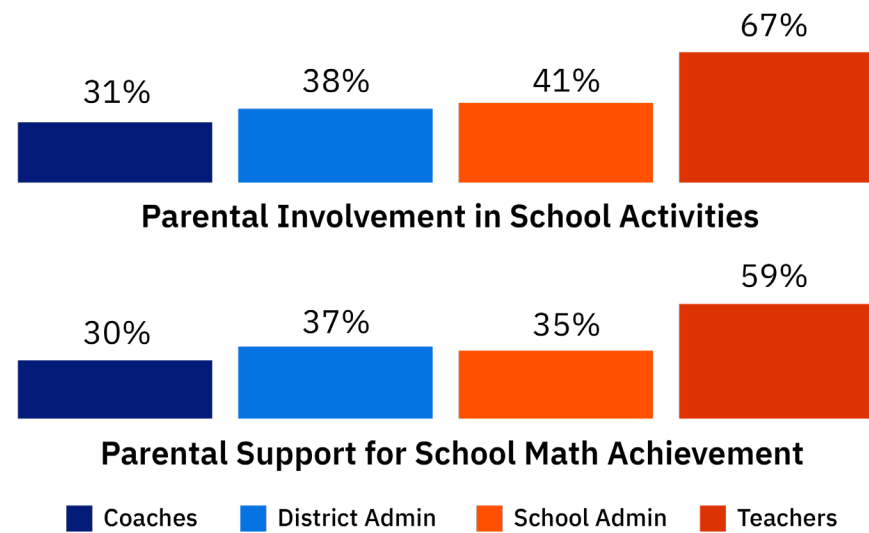


“There’s always been a very big push with reading, and math has always been neglected...There’s reading coaches. There’s reading interventionists. There’s all these things devoted to reading, which- don’t get me wrong- reading is absolutely important. But there’s nothing for math, you know, and teachers feel it.”

- Southwest Florida District Leader

Alongside conversations about such investments was a frequent recognition that the amount of support for mathematics pales in comparison to that given to reading in Florida. Educators were quick to note that the state of Florida has invested heavily in reading initiatives at home, such as the New World’s Reading Initiative which includes extensive partnerships with schools and other education and community organizations, dedicating additional time for literacy instruction, additional support staff and resources or allocating funds for teachers to earn a literacy endorsement. Likewise, they commented about the absence of such an investment for mathematics, noting the infrastructure needed to adequately support students at home and at school does not exist. More specifically, parents/caregivers are an untapped resource that have traditionally been excluded from such conversations.

Emphasized in Schools



Among 917 survey responses, teachers, coaches and school or district administrators indicated that parental involvement and support are not frequently emphasized in Florida schools. Moreover, across 84 focus groups with 284 adult participants, mathematics was frequently described as being embedded throughout society from determining the best price for an item at the grocery store to strengthening our national security. However, although parents and caregivers may frequently be able to support their children in becoming critical consumers when making financial decisions, it does not often translate well into school mathematics, leaving families frustrated as they struggle to help their children with mathematics.

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“They [parents] don’t even know how to help the kid. And it’s hard because the kid’s getting behind. And then once they’re getting behind once, they keep getting behind every year. And that’s what we struggle [with].”

- Southeast Florida Parent”

Parents shared that mathematics is taught differently today than how they learned it. For instance, rote memorization of procedures and facts is a less common practice than when most parents were in K-12 school, and there are frequent requests from teachers, math coaches and business professionals for professional learning on how to engage students in deeper understanding through novel math tasks that may not have clear solutions or solution paths. Such requests are in alignment with the Florida B.E.S.T. Mathematical Thinking and Reasoning Standards (MTRs; FLDOE, 2020) that focus on the types of activities students should engage in as they work toward mathematical proficiency to be college and career ready. As schools and districts make more efforts to align instructional practices with the MTRs, parents and caregivers will need even more support at home to help their student(s)—especially given the fact that only 45% of parents we surveyed felt comfortable talking to their student’s teacher about how they teach math.



Schools Can Offer After-School Tutoring Programs

Another such resource might include **freely-available tutoring programs**, which were requested from teachers, district leaders, politicians and others. Such programs are in high-demand, especially among less well-resourced communities, and could be structured similarly to the types of tutoring programs available for literacy. To bring these ideas to fruition, districts must have access to resources and/or funding that can be used in ways that meet the needs of their particular student populations. Having the flexibility to spend funds in relation to district needs was a request frequently heard from district leaders.

Recommendation: Expand and Deepen After School and At-Home Math Resources

Schools Can Offer Community Mathematics Events

In order for students to get the support they need in mathematics beyond the school day, districts and other stakeholders must connect with families around mathematics. Families need opportunities to be exposed to the type of mathematics learning their children experience because it is often different from what they experienced as a student. **Family math nights, parent academies and community-embedded mathematics events** hosted by districts or community organizations were suggested by teachers and district leaders as potential ways to meet this need. Hosting family math events is also a great way for teachers to build relationships with families and open lines of communication so parents feel more comfortable engaging with mathematics.

Schools Can Support Families With Mathematics at Home

Schools should also consider strategies for supporting families such as **sending home informational flyers** (in multiple languages) or **instructional videos** with information about the mathematics students are learning in school and how parents/caregivers can support their students at home. To accompany such resources, schools can create **math kits with manipulatives** (e.g., dice, counters, unifix cubes) and **activities** to send home with students so that families can experience mathematics together through play. Such resources serve as a starting point for parents and family members when their child(ren) needs help in mathematics.



References

Florida Department of Education [FLDOE]. (2020). *Florida K-12 mathematical thinking and reasoning standards*. Florida's B.E.S.T. Standards: Mathematics. Retrieved from <https://www.fl DOE.org/academics/standards/subject-areas/math-science/mathematics/>

