lastinger listening tour

Florida Mathematics Teachers Need High-Quality Professional Learning

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In the Spring of 2026 we conducted a follow-up to our 2023 listening tour (UF LC, 2025) to more deeply understand the current state of mathematics-specific professional learning (PL) across Florida. This brief reports on what we learned from teachers, school and district coaches, and school and district administrators from survey responses and focus groups about their current needs and priorities for supporting high-quality teaching and learning in Florida schools. For a comprehensive report of our methodology, visit lastinger.ufl.edu.

Access to Math-Specific Professional Learning is Limited, but Desired

Across Florida, 328 K–12 teachers responded to a question about the type of math-specific PL they had participated in over the past two years. Among these respondents, 43% reported participating in PL required by their district, and 60% reported participating in PL suggested by their district. However, nearly one-quarter (23%) reported participating only in self-selected PL. In other words, their districts neither suggested nor required the PL; instead, these teachers sought out opportunities on their own. In addition, 35% of teachers reported participating only in suggested PL, meaning their districts had not required any math-specific PL during the past two years.

A comparison of teachers' PL experiences between those who participated only in self-selected PL and those who participated in district-required or district-suggested PL reveals several substantive differences. For example, teachers who participated only in PL they found on their own were substantially more likely than other teachers to report experiencing PL in which content built over time, supported changes in practice over time, included feedback from experts, and was easy to adapt and implement in their classrooms—all features of high-quality PL (Alicea et al., 2025). They were also much more likely to experience online and self-paced delivery formats, which can expand access and flexibility in when and where they can engage in PL. Notably, although teachers participating in self-selected PL were more likely to report these features of high-quality PL, several important features were still reported infrequently, including expert feedback and sustained, long-term PL. Both are essential cornerstones of a strong math-specific PL system that supports teaching and learning across the state.

Aside from these differences, teachers also reported several similar experiences. Those who participated only in self-selected PL and those who participated in district-required or district-suggested PL reported similar rates of experiencing features associated with high-quality PL (Alicea et al., 2025), including content aligned with standards (61% vs. 64%, respectively), opportunities for collaboration (24% vs. 30%), and support from a math coach (21% vs. 27%).

Features	Required/Suggested	Self-Selected
Online	43%	92%
Content easily adapted/ implemented	48%	75%
Self-paced	23%	54%
Content built on ideas over time	20%	47%
Making changes to practice to improve over time	29%	46%
Expert feedback	15%	38%
In person	64%	24%
Multiple-session/long-term format	9%	22%

Beyond the features and structures of the PL teachers experienced, both groups reported spending about the same amount of time in math-specific PL over the past two years. Half of the teachers who experienced only self-selected PL reported a combined total of 34 hours or less, while half of those who experienced district-required or district-suggested PL reported 30 hours or less. In addition, 25% of teachers in the two groups reported engaging in 10 hours or less and 8 hours or less, respectively. These findings suggest that even when teachers are not required to participate in PL or given district-recommended options, they still actively seek out and engage in math-specific PL at rates similar to those of other teachers. Although these results highlight the limited amount of math-focused PL many teachers receive, the number of hours alone does not determine PL effectiveness. Simply increasing the amount of PL is unlikely to improve practice unless those experiences reflect the features of high-quality PL (Steiner et al., 2025; Witkowski, 2022).

"There's very few times that I've actually had math-specific professional learning. A lot of the professional development that we get is school-wide or district-wide, and it's very general."

- High School Teacher

Adding descriptive depth to these survey findings, 89 Florida K–12 teachers across 32 focus groups frequently described past PL as ineffective because it was too general, lacked grade-level or content specificity, or repeated information they had already received. In addition, teachers in 25% of the focus groups identified a lack of math-specific PL as a major constraint on impactful PL.

This finding is echoed in survey responses from 103 math coaches and 33 administrators who reported making decisions about PL. These respondents indicated that PL was delivered by districts (77% of coaches vs. 35% of administrators), textbook companies (64% vs. 74%), educational technology companies (25% vs. 52%), and the Florida Department of Education (35% for both groups). Together, these findings suggest that a large share of PL focuses on how to use curriculum materials and platforms rather than on how to strengthen instructional practice and deepen content knowledge. Consistent with these experiences, teachers expressed a desire for more math-focused PL tailored to their grade level and content area, as well as a wider variety of learning opportunities to meet their needs. See our brief report on alignment of district priorities with teacher needs for further discussion (UF LC, 2026).

Across 26 focus groups with 76 coaches and administrators, participants similarly reported that many PL experiences were too generic, lacked math-specific content, or focused primarily on curriculum rather than instruction. They also identified limited coaching capacity as a significant barrier to implementing effective PL.

Ultimately, more PL does not necessarily mean better PL. To support high-quality mathematics instruction across Florida, teachers need sustained and practice-focused learning experiences, regardless of the total number of hours provided.

Current and Desired Professional Learning Align with Some High-Quality Features, but Key Gaps Remain

Research on high-quality PL aligns with several of the PL features described by stakeholders. The Research Partnership for Professional Learning's (RPPL) research-based framework for effective curriculum-based PL emphasizes that effective PL should be collaborative, supported by coaches, intensive and sustained, supportive of teachers in meeting individual student needs, grounded in practice, staged over time, able to balance curriculum fidelity and adaption, evidence-informed, driven by effective leadership, and anchored in a shared instructional vision (Alicea et al., 2025).

"I find that whenever we just do a PD and kind of leave it, and then that's it, it has less impact than if we have the same group repeatedly in support."

- Elementary Math Coach

During focus groups, when asked about their past experiences with effective math-specific PL, teachers, coaches, and administrators frequently described PL as collaborative, connected to classroom instruction, experiential, focused on standards and curriculum implementation, and inclusive of vertical planning across grade levels. Specifically, teachers reported that effective past PL was often collaborative (63% of focus groups) and applicable to their classrooms (55%). Coaches highlighted opportunities for teachers to engage with mathematics content as learners and to observe effective instruction. Administrators emphasized standards-focused, collaborative PL and described using student achievement data to inform PL priorities and evaluate impact.

However, participants also identified several ways current PL falls short of high-quality professional learning. Teachers consistently described receiving PL that focused more on what to teach than on how to teach mathematics, with insufficient attention to strengthening instructional practice. Additionally, across stakeholder groups, ongoing coaching and follow-up were described as inconsistent, and coaches identified limited coaching capacity as a major barrier to supporting implementation. Participants also rarely described PL as part of sustained, sequenced learning experiences that allow teachers to implement new practices, receive feedback, reflect, and refine their instruction over time. Similarly, few participants discussed support for implementing high-quality instructional materials (HQIM) with fidelity while also making purposeful adaptations to meet students' needs.

> ***"When you try to take things back [to your classroom], sometimes you get going and you try to implement it, but you still have questions. It would be nice to be able to have a fallback on, like, okay, I've tried this, but what am I missing?"***
>
> **- Elementary Teacher**

Stakeholders' vision for future PL closely reflected many features of high-quality professional learning. Teachers, coaches, and administrators consistently described wanting learning experiences that are collaborative and immediately applicable to classroom instruction. Teachers also emphasized a desire for job-embedded opportunities to observe peers or coaches using effective instructional practices, while coaches and administrators highlighted the importance of classroom-embedded coaching and follow-up support as teachers implement new learning. As illustrated in the graphic, the PL features teachers most want are closely aligned with evidence-based features of high-quality PL.

Although participants' most desired PL features align with research, several evidence-based features were notably absent from both current and desired PL experiences. References to balancing curriculum fidelity with classroom adaptation were rare, appearing in only 2% of focus groups. This suggests limited guidance on how to differentiate instruction while maintaining the integrity of HQIM, a particularly important finding given the growing emphasis on and need for HQIM (Alicea et al., 2025). Similarly, staged, over-time learning was rarely mentioned, with only 5% of focus groups discussing it when describing current effective or desired PL, reflecting survey results showing that sustained PL progressions remain uncommon despite evidence that teacher learning develops incrementally and through intentional sequencing of PL experiences rather than through isolated events (Alicea et al., 2025). Finally, effective leadership was seldom mentioned as a feature of either current or desired PL. This is consistent with survey findings showing that only 42% of teachers reported receiving district support for their PL. While teachers frequently discussed administrative support in logistical terms, such as funding, scheduling, and approval, they rarely described leaders as active participants in establishing a shared instructional vision or fostering the conditions necessary for coherent, curriculum-based PL.

Teachers' Most Desired PL Features

- Applicable to the classroom
- Collaborative
- Seeing best practices modeled
- Supported by coaches
- Provides differentiation ideas
- Opportunities to implement, reflect, and receive feedback

These findings suggest that Florida has a strong foundation, with some current and desired PL experiences reflecting key features of high-quality PL. However, high-quality PL depends on the integration of multiple evidence-based features, and the absence of sustained and coherent support limits its potential impact. Without these essential components, even well-designed PL is less likely to produce lasting improvements in teaching and learning (Alicea et al., 2025).

Recommendation: Invest in Math Coaches to Strengthen and Scale High-Quality Professional Learning

Research clearly shows that PL is most effective when it includes ongoing support from math coaches or other experts who can provide feedback (Alicea et al., 2025; Hill & Papay, 2022). Likewise, teachers, coaches, and administrators all identified this as a top feature of their desired PL experiences. However, coaches and administrators also noted that they lack the funding and staffing capacity to scale PL with these design features.

Expanding math coaching capacity would address one of the clearest barriers identified in the findings: the gap between one-time PL experiences and sustained support for implementation. Math coaches can model evidence-based instructional practices, support teachers in using HQIM effectively, and provide the ongoing, job-embedded feedback that research identifies as central to high-quality PL (Alicea et al., 2025; Hill & Papay, 2022). This investment is especially important in the context of Florida's current educator workforce, with more than 5,000 teachers assigned to math courses without appropriate certification (FLDOE, 2025). Strengthening math coaching capacity would help build a more scalable statewide infrastructure for supporting teacher growth, instructional quality, and student learning.

Recommendation: Prioritize Job-Embedded, Math-Specific Professional Learning

To build a strong statewide PL system aligned with the B.E.S.T. Mathematical Thinking and Reasoning (MTR) Standards (FLDOE, 2020), districts should prioritize job-embedded, math-specific PL over one-time workshops disconnected from classroom practice. Across surveys and focus groups, stakeholders consistently reported that much of the PL they experienced was too general, insufficiently focused on mathematics, and often centered more on what to teach than on how to teach it. In contrast, teachers, coaches, and administrators described wanting PL that is collaborative, relevant to their grade level and content area, and immediately applicable to instruction.

Job-embedded PL responds directly to these needs by giving teachers opportunities to apply new practices in their own classrooms, observe effective instruction, collaborate with peers, reflect on implementation, and receive timely feedback over time. Existing models, such as the UF Lastinger Center's Math Matrix Micro-Credential aligned to Florida's MTR Standards (FLDOE, 2020), demonstrate how this kind of PL can be integrated into teachers' daily work through authentic instructional tasks, reflection, and feedback. When supported at the school and district levels, job-embedded, math-specific PL has strong potential to improve instructional practice and strengthen student learning (Engledowl & de Araujo, 2025).

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