The coronavirus disease 2019 (COVID-19) pandemic has negatively affected K–12 students’ academic learning and social, emotional, and mental health. Schools now face the monumental task of addressing pandemic learning progress and mental health and well-being needs. The 2022 National Assessment of Educational Progress (NAEP) test results revealed a substantial nationwide decline in mathematics proficiency in grades 4 and 8 (Sparks, 2022). Twenty-five percent of students in grade 4 and 38 percent in grade 8 did not meet basic standards in mathematics. Black and Hispanic students, who tended to receive less in-person instructional time (Kaufman and Diliberti, 2021) and who experienced more trauma during the pandemic (National Institute of Environmental Health Sciences, undated), experienced disproportionately large declines, further widening the mathematics opportunity gap among historically underserved students that existed long before the pandemic. The urgent need to help all students—and particularly students who are Black and Hispanic—recover in mathematics learning and access equitable opportunities in mathematics will require that teachers use every available tool to diagnose student learning needs and identify solutions.

Student data—especially data that are disaggregated by student race and ethnicity or income—has the potential to be a powerful tool to guide instruction and contribute to improvement in student learning in mathematics. Prior research on mathematics teachers’ use of data has found that the impact on student learning varies based on the data used, the amount of training or guided analysis support provided to teachers, and grade level, among other contextual factors. One study (Keuning et al., 2019) found that a two-year professional learning program that developed teachers’ analysis skills and facilitated their use of test score data improved student performance on standardized tests in mathematics. Another study found teachers’ use of interim assessments (assessments administered between day-to-day formative assessments and summative state assessments) were positively—but not statistically significantly—related to small improvements on mathematics test scores in grades 3–8 but significantly related to larger decreases in grades K–2 (Konstantopoulos et al., 2016). In a study of four urban school districts, teachers’ use of interim assessment data was...
correlated with higher student achievement in mathematics for middle school students but not elementary school students (Faria et al., 2012).

Student data come in many forms. The most common types of data teachers tend to use include (in descending order of frequency): informal assessments, standardized or benchmark assessments, classroom observations, attendance, demographic data, instructional strategies on standards-aligned content, and growth reports (Sun, Przybylski, and Johnson, 2016). When making decisions about their instruction, teachers frequently compare the available quantitative data (e.g., benchmark assessments) with their knowledge of students’ behavior, which they have gathered qualitatively, often through periodic conversations with students (Ho, 2022). Sometimes teachers will use assessment data reactively to confirm the beliefs they have already developed about students’ academic performance based on their classroom observations (Choi et al., 2022).

Prior work suggests student data are most valuable when they meet three conditions. First, the data should be accessible in a timely manner (Sun, Przybylski, and Johnson, 2016), such as being stored in an electronic data management system that can be directly used by teachers. Second, these data should be disaggregated, or broken down, into smaller demographic groups. Disaggregated student data are typically separated by gender, race, ethnicity, or family income and allow teachers, school and district administrators, and state policymakers to identify disparities between student groups and identify and enact equitable solutions that tailor instructional supports to intentionally meet the needs of students (National Forum on Education Statistics, 2016). For example, analyzing disaggregated student data could

**KEY FINDINGS**

- Nearly all K–12 Florida mathematics teachers reported having access to student data on attendance, grades, standardized test scores, and formative student assessment scores through their electronic data management systems. More than two-thirds also had access to students’ disciplinary and course enrollment histories.

- Only one-third of K–12 Florida mathematics teachers had access to student data on social and emotional competencies and postsecondary outcomes through their electronic data management systems.

- Less than one-half of K–12 Florida mathematics teachers had access to student data through their electronic management systems that had been disaggregated by race, ethnicity, and family income (between 16 percent to 45 percent, depending on the type of data).

- K–12 Florida mathematics teachers were more likely than mathematics teachers nationally to report access to all the types of student data we asked about through their electronic data management systems and were more likely to rely on formalized data sources (e.g., standardized mathematics tests) when prioritizing what mathematics content to teach.

- Similar percentages of K–12 Florida mathematics teachers from large and small Florida school districts had access to student data through their electronic data management systems; however, those in small school districts were far less likely to have had access to disaggregated data.

- Elementary (grades K–5) and secondary (grades 6–12) Florida mathematics teachers used different data to identify struggling students.

**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVID-19</td>
<td>coronavirus disease 2019</td>
</tr>
<tr>
<td>FAST</td>
<td>Florida Assessment of Student Thinking</td>
</tr>
<tr>
<td>GPA</td>
<td>grade point average</td>
</tr>
<tr>
<td>IEP</td>
<td>Individualized Education Program</td>
</tr>
<tr>
<td>FRPL</td>
<td>free or reduced-price lunch</td>
</tr>
<tr>
<td>LTS</td>
<td>Learn Together Survey</td>
</tr>
<tr>
<td>NAEP</td>
<td>National Assessment of Educational Progress</td>
</tr>
</tbody>
</table>
help teachers identify (and elevate or address) unintentional biases that would otherwise be difficult to identify. Finally, teachers should not rely just on qualitative data (e.g., classroom observations) to support students but rather should use that information in combination with quantitative sources (Ho, 2022).

Teachers also need help from their school leaders to use data effectively in their daily instruction. According to a recent meta-analysis of teachers’ use of data, teachers often lack the time to review student data or collaborate with peers, prior experience in data analysis, or systematic supports to use school data (Sun, Przybylski, and Johnson, 2016). School leaders can support teachers’ use of data by motivating the purpose for data analysis; providing professional learning, technical support, and sufficient time to review data; and facilitating promising, data-driven instructional practices identified within the school (Sun, Przybylski, and Johnson, 2016).

Supports and structures for data use differ across contexts, as does data access. Although disaggregated student data are only one of many tools teachers use to inform their instructional decisions, the low 2022 NAEP scores in mathematics, coupled with the potential for data use to improve student achievement, motivate our examination of data access and use in a specific state, Florida, which had similar percentages of students not meeting the lowest NAEP benchmark level as the nation (Sparks, 2022). Teachers’ use of data could be a valuable tool in addressing these challenges. However, to do so, teachers must have access to informative types of data, be supported to analyze data, and implement data-informed practices effectively, given constraints on their time and resources.

In this report, we provide a look at the student data that Florida mathematics teachers have access to and use to identify students in need of instruction support. We present selected findings from the 2022 Learn Together Survey (LTS) to address the following research questions:

1. Which types of student data do Florida mathematics teachers have access to through electronic data systems?
2. Which types of student data are Florida mathematics teachers using to identify students in need of instructional supports and make decisions about the standards-aligned mathematics content they prioritize?
3. How do Florida mathematics teachers’ access to and use of student data compare with mathematics teachers nationally?
4. Are Florida mathematics teachers being supported to use student data?

The findings of this report are descriptive and intended to contribute to Florida policymakers’ understanding of which student data mathematics teachers have access to and how teachers are using these data to inform their instructional decisions. We conclude with implications and policy recommendations based on our analysis.

### Survey Data, Methods, and Limitations

This report examines Florida mathematics teachers’ access to and use of student data by leveraging data from the American Teacher Panel. The 2022 LTS was administered in March 2022 to 3,606 teachers, 186 of whom were Florida mathematics teachers. Teachers were oversampled in Florida to permit state-level subgroup analyses. The 2022 LTS topics featured in this report include using data for decisionmaking, supporting struggling students, teaching mathematics, and perceptions of principals.

The main limitation of our data is that the sample size of Florida mathematics teachers is small, which restricted our ability to detect potential statistical significance for all subgroup differences. We explored whether Florida mathematics teachers’ responses differed according to teacher characteristics, school context, or the attributes of the students in their schools. However, in our reporting, we focus on differences between teachers serving in large and small school districts and differences between elementary and secondary teachers. We focus on these teacher groups because these sample sizes were reasonably large enough to conduct subgroup analyses, and differences between groups were substantive. Unless otherwise noted, we describe differences among subgroups that are statistically significant ($p < 0.05$) and robust in linear regression models that controlled for school and teacher characteristics. Our reports of mathematics teachers nationally also include the responses of Florida mathematics teachers to accurately convey the national response. We denote where differences between Florida mathematics teachers and mathematics teachers nationally hold after controlling for school context and where they do not. See our “How We Analyzed These Data” box at the end of this report for more information about how we did the analysis.
Florida Mathematics Teachers Had Access to Most Student Data Types Electronically, but Access to Complex, Disaggregated Data Was Uncommon

We asked teachers whether they had access to student data through an electronic data management system. Although electronic data management systems are not the only way teachers can access student data, they can be a useful tool for rapid and reliable access. Most Florida mathematics teachers reported having access to most of the student data we asked about (Figure 1). Nearly all Florida mathematics teachers had access to data on attendance, student grades or grade point average (GPA), standardized test scores, and formative student assessment scores. More than two-thirds also had access to data on students’ disciplinary and course enrollment histories.

The only two types of data that a majority of Florida mathematics teachers did not have access to were social and emotional competencies and postsecondary application, enrollment, or transition outcomes. The percentage of Florida mathematics teachers reporting access to postsecondary outcome data was similarly low among elementary and high school mathematics teachers, suggesting that these results are not only because postsecondary outcomes occur closer in time to upper grades. These results are not surprising, as most principals report not having access to postsecondary data (Doan et al., 2022), suggesting that schools might not collect it.

Less than Half of Florida Mathematics Teachers Had Access to Disaggregated Student Data Electronically

Data disaggregated by student characteristics, such as race and family income, can help teachers accurately identify disparities between student groups. Less than half of Florida mathematics teachers had access to each student data type in a disaggregated form (Figure 2). Roughly one-third of Florida mathematics teachers reported access to disaggregated data on student disciplinary history and course enrollment history. Very few Florida mathematics teachers had
access to disaggregated data on social and emotional competencies and postsecondary outcomes.

Florida mathematics teachers were significantly more likely than mathematics teachers nationally to have access to all the forms of disaggregated student data we asked about in the survey, with the exception of standardized test scores and social and emotional competencies. However, none of these differences held after including regression controls for school and teacher characteristics, suggesting that these differences might be more related to school and district context than to differences in policy or data infrastructure between Florida and other states.

The differences between Florida mathematics teachers and mathematics teachers nationally in access to disaggregated student data are greater than they are for access to aggregated student data for most types of student data. For example, 45 percent of Florida mathematics teachers had access to disaggregated attendance data compared with 32 percent of mathematics teachers nationally. This is a difference of 13 percentage points, compared with a difference of 5 percentage points in access with regards to the aggregated student data.

**Fewer Florida Mathematics Teachers in Small School Districts Had Access to Disaggregated Student Data Electronically than Did Those in Large School Districts**

Our analysis suggests that Florida mathematics teachers’ access to student data varies by district size. Prior research supports this hypothesis; teachers in larger school districts nationally often have access to an electronic data system with more reporting options and have more resources to hire specialized staff to analyze data, two conditions that can help teachers
Florida Mathematics Teachers’ Access to Disaggregated Student Data Through an Electronic Data Management System Compared with National Mathematics Teachers

![Figure 2](image)

**FIGURE 2**
Florida Mathematics Teachers’ Access to Disaggregated Student Data Through an Electronic Data Management System Compared with National Mathematics Teachers

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Florida Mathematics Teachers</th>
<th>National Mathematics Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>45</td>
<td>32</td>
</tr>
<tr>
<td>Standardized test scores</td>
<td>44</td>
<td>41</td>
</tr>
<tr>
<td>Formative student assessment scores</td>
<td>42</td>
<td>32</td>
</tr>
<tr>
<td>Student grades/GPA</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Student disciplinary history</td>
<td>38</td>
<td>25</td>
</tr>
<tr>
<td>Course enrollment histories</td>
<td>31</td>
<td>17</td>
</tr>
<tr>
<td>Social and emotional competencies</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Postsecondary application, enrollment, or transition outcomes</td>
<td>16</td>
<td>10</td>
</tr>
</tbody>
</table>

**NOTE:** This figure shows the percentage of mathematics teachers who reported having access to student data disaggregated by student race, ethnicity, and family income (e.g., receiving free and reduced-price lunch [FRPL]). No pairwise comparisons between Florida mathematics teachers and other mathematics teachers nationally were statistically significant at the $p < 0.05$ level and robust in linear regression models that controlled for school and teacher characteristics. At the end of each bar, we display the 95-percent confidence intervals as black lines for each estimate. $n = 186$ (Florida mathematics teachers) and $n = 1,709$ (national mathematics teachers).

We defined large school districts as those with student enrollment greater than or equal to the median school district in which Florida mathematics teachers from the LTS taught (i.e., districts with student enrollment greater than or equal to 100,495). We caution that this analysis is Florida-specific; Florida school districts are larger than the national average and few mathematics teachers from other states taught in school districts that were at least as large as the median Florida school district. This factor limited our ability to compare large Florida school districts with similarly large school districts in other states. Thus, this analysis describes differences between Florida’s relatively largest and smallest school districts that might not be true for school districts that are large or small relative to the national average.

There were no statistically significant differences in Florida mathematics teachers’ reports of access to student data by school district size (Figure 3). However, more Florida mathematics teachers from large school districts had access to disaggregated student data than those from small school districts (Figure 4). About half of Florida mathematics teachers from large school districts had access to disaggregated student data on attendance, student grades, standardized test scores, and student disciplinary history. In comparison, only one-third of Florida mathematics teachers from small school districts had such access.

**Florida Mathematics Teachers Were Most Likely to Use Diagnostic Tests and Their Own Observations of Students to Identify Struggling Students**

Florida mathematics teachers and mathematics teachers nationally reported using similar data types to identify struggling students: diagnostic tests that
Florida Mathematics Teachers Drew from Different Data Sources to Identify Struggling Students Depending on the Grade Levels They Teach

Elementary (grades K–5) and secondary (grades 6–12) Florida mathematics teachers drew from different data sources to identify struggling students (Figure 6). Elementary Florida mathematics teachers were most likely to consult diagnostic tests; their observations of students; tests or quizzes provided in their curriculum materials; and classroom tasks, assignments, or projects provided in their curriculum materials. Although secondary Florida mathematics teachers were also likely to use their observations of students to identify struggling students, they commonly used classroom tasks, assignments, or projects they created; tests or quizzes they created; or their conservations with students. The patterns in Florida mathematics teachers’ responses were similar to...
those between elementary and secondary mathematics teachers nationally. (The differences between elementary and secondary mathematics teachers nationally are not depicted in the figure.)

The differences between elementary and secondary Florida mathematics teachers generally align with the types of data we might expect they would have access to and be likely to use. First, tests we believe that Florida mathematics teachers likely interpreted as being diagnostic tests on the survey are not administered in upper grade levels. For example, the Florida Assessment of Student Thinking (FAST) in mathematics is a new progress monitoring assessment that began in the 2022–2023 school year and will be administered in only pre-kindergarten to grade 8 (Florida Department of Education, undated). Second, secondary teachers are more likely to have subject certification in mathematics than elementary school teachers (Doan et al., 2022) and create their own instructional materials (Doan et al., 2021). Finally, students’ metacognitive abilities (e.g., ability to articulate misunderstandings) improves with age (Van der Stel et al., 2010), and teachers in higher grade levels might be more inclined to query students about their learning.

### Florida Mathematics Teachers Were More Likely to Reference Standardized Test Results When Deciding Whether to Skip Standards-Aligned Content than Mathematics Teachers Nationally

Sixty percent of Florida mathematics teachers have skipped at least some standards-aligned mathematics
content compared with 70 percent of mathematics teachers nationally. Very few Florida mathematics teachers skipped content frequently (less than 1 percent), and neither did national mathematics teachers (4 percent).

Figure 7 presents the information sources mathematics teachers who reported that they skipped at least some content used to inform their decisions about whether to skip. Florida mathematics teachers regularly used the types of data we asked about (each type had at least two-thirds of teachers reporting some use) except for their knowledge of students’ future career and education plans. These information sources included their teaching experience, data about student performance on standardized mathematics tests, their knowledge of what students will learn in the next grade level, data about student performance on mathematics assessments provided with their curriculum, data about student performance on mathematics assessments teachers themselves develop, and their knowledge of mathematics.

Florida mathematics teachers’ responses were very similar to mathematics teachers nationally, with one exception. Florida mathematics teachers
Florida Mathematics Teachers Received Support Within Their Schools to Analyze Data

Teachers are more likely to effectively use student data to improve their instruction when they receive support on its use. A previous RAND report found that the most common supports teachers received were principal support of their data use, professional learning about data use offered at a school, and data analysis support from school or district data staff or a consultant (Berglund and Tosh, 2020). Teachers who

were more likely to report that they used data about student performance on standardized mathematics tests than were teachers nationally. This finding is consistent with other results in this report that suggest more Florida mathematics teachers have access to formal assessment results than mathematics teachers nationally do and are more likely to use them to inform their instruction.

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Elementary Mathematics Teachers</th>
<th>Secondary Mathematics Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic tests that measure student achievement growth</td>
<td>66</td>
<td>22**</td>
</tr>
<tr>
<td>Your observations of students</td>
<td>49</td>
<td>54</td>
</tr>
<tr>
<td>Tests or quizzes that are provided in your curriculum materials</td>
<td>36</td>
<td>24</td>
</tr>
<tr>
<td>Classroom tasks, assignments, or projects that are provided in your curriculum materials</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>Classroom tasks, assignments, or projects you created</td>
<td>22</td>
<td>44*</td>
</tr>
<tr>
<td>Students Individualized Education Programs (IEPs)</td>
<td>27</td>
<td>21</td>
</tr>
<tr>
<td>Required grade-level tests administered for accountability purposes</td>
<td>29</td>
<td>13</td>
</tr>
<tr>
<td>Tests or quizzes you created</td>
<td>44**</td>
<td></td>
</tr>
<tr>
<td>Conversations with students</td>
<td>11</td>
<td>41**</td>
</tr>
<tr>
<td>Conversations with parents, guardians, or other family members</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Conversations with teachers or administrators</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Conversations with school staff who are not teachers or administrators</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: This figure shows Florida mathematics teachers’ responses to the following survey question: “What three sources have you used most often to identify struggling students this school year (2021–2022)?” Asterisks denote statistically significant differences (* p < 0.05, ** p < 0.01) of pairwise comparisons between elementary Florida mathematics teachers (grades K–5) and secondary Florida mathematics teachers (grades 6–12) that were robust in linear regression models that controlled for school and teacher characteristics. At the end of each bar, we display the 95-percent confidence intervals as black lines for each estimate. We also examined differences between how Florida mathematics teachers and national mathematics teachers ranked their top three sources. We did not find substantive differences in the relative ranks compared with the broader choice of their top three sources, and therefore, do not include this analysis in the figure. n = 140 (elementary Florida mathematics teachers) and n = 45 (secondary Florida mathematics teachers).
were supported in these ways reported using data to do related instructional tasks, including making curriculum changes, identifying students needing customized instruction, and tracking student progress.

The 2022 LTS contained three survey questions that captured different aspects of support for teacher data analysis, including principal support, faculty collaboration, and professional learning. Large majorities of Florida mathematics teachers reported receiving support to analyze student data across all three measures (Figure 8). Eighty-six percent of Florida mathematics teachers reported, “My principal is effective at supporting continuous improvement of our approaches, processes, and tools by use of data and evidence.” Roughly three-quarters reported discussing mathematics achievement data in schoolwide faculty meetings and completing professional learning about addressing the mathematics learning needs revealed by student data. Although none of these differences between Florida mathematics teachers and mathematics teachers nationally held after we controlled for school and teacher characteristics, differences in discussing mathematics achievement in schoolwide faculty meetings and completing professional learning were large in magnitude and statistically significant before including controls.

We did not find any significant differences in data analysis supports by school district size within Florida or in pairwise comparisons between Florida mathematics teachers and mathematics teachers nationally of similar school types (e.g., schools with a majority of students receiving FRPLs). We could not examine whether Florida mathematics teachers’ use of student data differed by the support they received because so few Florida mathematics teachers did not receive at least some school-level support for data use.
Implications

Florida mathematics teachers are well positioned to use student data in a way that could help improve student outcomes in mathematics. First, Florida mathematics teachers have access to many different student data types. Second, Florida mathematics teachers often use diagnostic tests to inform their mathematics instruction but also rely on classroom observations, thus connecting quantitative and qualitative data. Third, elementary and secondary mathematics teachers use the data types we expect to be most readily available in their respective classrooms (e.g., elementary mathematics teachers were more likely to use diagnostic tests that are commonly administered in lower grade levels). Finally, large majorities of Florida mathematics teachers report having data analysis support across three valuable measures: principal support, faculty collaboration, and professional learning.

Despite these advantages, all Florida mathematics teachers do not have widespread or equal access to several promising student data types: data that are disaggregated by student race/ethnicity or family income, postsecondary outcomes, and social and emotional competencies. Fewer mathematics teachers from small Florida school districts had access to disaggregated data than teachers from large Florida school districts. Also, most Florida mathematics
the pandemic raised concerns about students’ mental health (Viner et al., 2022). Social and emotional competencies data (such as school climate and emotional intelligence assessments) can be a valuable tool for teachers and school leaders to monitor students’ individual progress toward responsible decisionmaking and social awareness and create a supportive learning environment (Stillman et al., 2018). Surveys of district staff indicate that measurement of social and emotional competencies was common during the pandemic (Yoder et al., 2020), but it is not clear how accessible this information was to teachers or whether they had access to professional learning to facilitate its use.

- **Increase Florida mathematics teachers’ access to disaggregated student data, especially in smaller school districts where access is lower than large school districts.** Disaggregated data allows teachers and school leaders to identify disparities among student groups related to mathematics achievement (e.g., the number of advanced mathematics courses taken by Black students) and prepare students for postsecondary success. Students who complete more-advanced mathematics courses in high school have higher mathematics achievement by grade 12 and are more likely to enroll in college (Byun, Irvin, and Bell, 2015; Ogut, Circi, and Yee, 2021). They also have higher earnings after high school than those who do not take more-advanced courses, in part because they are more likely to complete a postsecondary degree (Joenson and Nielsen, 2009). Increasing teachers’ access to such data might require financial investment to update data systems, provide teachers with professional learning, or hire specialized staff. One possible source of funds is the influx of federal dollars from COVID-19 relief efforts.

- **Provide Florida mathematics teachers with access to data on students’ social and emotional competencies and professional learning to facilitate their use.** In addition to the opportunity gap in mathematics learning,
do not capture a comprehensive range of data analysis. Other common resources include data analysis support from specialized staff, paid time to review student data, and formal coursework on data use (Berglund and Tosh, 2020). Also, by offering teachers data literacy programs, schools can improve teachers’ proficiency in using student data and teachers’ beliefs in their own self-efficacy to use student data in a valuable way (Filderman et al., 2022). Because Florida mathematics teachers rely on different data types depending on the grade levels taught, data literacy programs should be customized to elementary and secondary teachers based on the data types most available in their classrooms. School, district, and state leaders should prioritize teachers’ receipt of these supports to use student data effectively, especially when considering increasing access to new, complex forms of data.

**Limitations**

There are three primary limitations to keep in mind. First, our sample of Florida mathematics teachers is small (n = 186). Although our sample of mathematics teachers is a subgroup of a larger, state-representative sample of Florida teachers, these results might not generalize to all mathematics teachers in the state and any differences across teacher subgroups should be interpreted cautiously. The size of our sample limits our ability to detect statistically significant differences across subgroups (e.g., professional experience), so we present only subgroup differences that are large in magnitude. Second, our analysis is purely descriptive and does not suggest causal relationships. Finally, the LTS data are self-reported responses to survey questions and might be subject to reporting bias, and respondents might interpret items differently; limitations present in all survey research.

**How We Analyzed These Data**

Data for this report were drawn from the 2022 LTS. The LTS has been administered yearly to K–12 teachers in March and April via the RAND Corporation’s American Teacher Panel since 2019. The survey was developed by RAND, in collaboration with the Bill & Melinda Gates Foundation, to generate nationally representative data on teacher perspectives.

The 2022 LTS survey yielded 3,608 responses out of 6,368 invitations for teachers with 103 screened-out cases (58 percent completion rate; Doan et al., 2022). Each LTS respondent was assigned a weight to ensure that estimates based on the LTS sample reflect the national (or state) population of teachers. Characteristics that factor into this process include descriptors at the individual level (e.g., gender, professional experience) and school level (e.g., school size, level, locale, socioeconomic status). Teachers were oversampled in five states, including Florida, to permit state-level subgroup analyses. This report relies on the responses of 404 Florida K–12 teachers, 186 of whom were categorized as mathematics teachers based on their responses to the survey question, “Are you teaching any mathematics courses this school year (2021–2022)?” This report also relies on the responses of 1,733 K–12 mathematics teachers nationally, which include the responses of the 186 Florida mathematics teachers.

In this report, we compared teacher responses across various school and teacher-level characteristics, including geographic region (Florida compared with national), grade band taught, and district size. We also compared but did not report differences by school locale (city, suburban, town, rural), school FRPL enrollment and years of professional experience. We did not report these comparisons because they were not substantively different or had limited interpretation because of the small sample size. School demographic characteristics were obtained from the 2019–2020 and 2020–2021 National Center for Education Statistics’ Common Core of Data, depending on the most recent data available for the school.

All comparisons made in this report are unadjusted for statistical controls and tested for statistical significance at the p < 0.05 level using t-tests. We verified the robustness of these comparisons using linear regression models that controlled for the inclusion of school characteristics (i.e., grade level, school locale, FRPL enrollment rate, and school district enrollment size) and teachers’ years of total teaching experience. We note where educator subgroup differences were descriptively different but are no longer significant after controlling for school-level and educator-level characteristics. These regression analyses are useful for understanding the drivers of differences, but we do not present regression adjusted statistics because we believe that these subgroup differences remain notable even if they could be driven by multiple underlying factors. Finally, we did not make statistical adjustments for multiple comparisons because the intent of this report is to provide exploratory, descriptive information rather than to test specific hypotheses or causal relationships.
About This Report

In this report, we draw on January 2022 surveys of teachers from the American Teacher Panel (ATP), which is a nationally representative sample of more than 22,000 teachers across the United States. The ATP is one of three survey panels that comprise the American Educator Panels (AEP), which are nationally representative samples of teachers, school leaders, and district leaders across the country. The panels are a proud member of the American Association for Public Opinion Research’s Transparency Initiative.

For technical information about the surveys and analysis in this report, please see Learn Together Surveys: 2022 Technical Documentation and Survey Results (RR-A827-9, available at www.rand.org/t/RRA827-9). If you are interested in using AEP data for your own surveys or analysis or in reading other publications related to the AEP, visit www.rand.org/aep or contact aep@rand.org.

RAND Education and Labor

This study was undertaken by RAND Education and Labor, a division of the RAND Corporation that conducts research on early childhood through postsecondary education programs, workforce development, and programs and policies affecting workers, entrepreneurship, and financial literacy and decisionmaking. This report is based on research funded by the Bill & Melinda Gates Foundation. For more information and research on these and other related topics, please visit gatesfoundation.org.

More information about RAND can be found at www.rand.org. Questions about this report should be directed to lgreer@rand.org, and questions about RAND Education and Labor should be directed to educationandlabor@rand.org.

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