



Tennessee Learning Loss Remediation and Student Acceleration Act

2023 Annual Report

Tennessee Department of Education | November 2023



Executive Summary

This report was prepared pursuant to [Title 49, Chapter 6, Part 15 of the Tennessee Code](#). Known as the Tennessee Learning Loss Remediation and Student Acceleration Act (the Act), the Act requires the Tennessee Department of Education (department) to establish and administer a learning loss remediation and student acceleration program and set requirements for the program to accelerate student learning in the wake of COVID-19 related disruptions to learning. The Act initially required school districts and participating charter schools to offer three types of learning loss remediation—after-school learning mini-camps¹, summer learning camps, and learning loss bridge camps—and administer a pre- and post-test to measure the academic improvement of students who attended summer learning programs.

The department, required by the Act, develops a report annually to provide information about the effectiveness of the state’s learning loss remediation and student acceleration program. This report is provided to the Governor, Speaker of the Senate, Speaker of the House of Representatives, and chairs of the House and Senate education committees by November 1st of each year.

In accordance with the Act, this report provides the findings from the 2023 summer learning programs and contains a state-wide summary of enrollment and attendance, an analysis of staffing trends, and student performance on pre- and post-tests across all summer learning programs (i.e., summer learning camps and summer learning loss bridge camps). Student performance outcomes are reported by teacher effectiveness level (i.e., Level of Overall Effectiveness [LOE]) and disaggregated by subject, grade level, and the camp type (i.e., summer learning camp or summer learning loss bridge camp). For 2023, testing metrics and the district survey are updated from prior versions. Thus, the ability to draw direct comparisons between growth and other measures from year-to-year is limited.

Key Findings

- Widespread participation in summer programs that began in Summer 2021 continued with 102,270 students enrolled (40.6 percent rising K-3; 59.3 percent rising 4-9).
- Summer programming overall has a positive effect on students who attended the camps, yet the effect varied by grade level and subject area.
 - When attendance was not considered in the analysis, meaningful growth in math was demonstrated in the summer learning camp group of rising grades 1-3 students, and meaningful growth in ELA was demonstrated in the learning loss bridge camp group of rising grades 4-9 students. More specifically, meaningful growth was observed among rising grades 1, 2, and 3 in math and among rising grades 4 and 9 in ELA.

¹ After-school mini-camps were discontinued following the 2021-2022 school year.

- When attendance was considered in the analysis (i.e., students attended at least 50 percent of the camp), slightly higher growth was seen for rising grades 1-3 in math and for rising grade 9 in both math and ELA.
- Of all camp teachers staffed in the summer of 2023, 63.1 percent had a valid LOE score with an average of 4.1 on a scale of 1-5. Of those, about half had a LOE score of 4 or 5. Results of statistical testing suggest, overall, teacher LOE score is positively associated with student growth. This relationship is statistically significant among the following grade levels:
 - Rising grades 1-3 and 4-9 math growth
 - Rising grades 4 and 8 math growth
 - Rising grades 4-9 ELA growth
 - Rising grades 1 and 4 ELA growth
- Districts overwhelmingly agreed that value was added to the learning experiences of the students in their districts through summer programming (94.9 percent) and STREAM curriculum (92.7 percent).
- Most districts reported having adequate staffing for summer learning camps (87.8 percent) and summer learning loss bridge camps (89.2 percent).

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Background

In 2021, Governor Lee and the Tennessee General Assembly put in place proactive support to mitigate COVID-19 learning loss and accelerate academic recovery, including legislation on literacy, learning loss, accountability, and teacher pay. Included in this

2023 is the first year in which programming was extended to include rising kindergarten and rising grade 9 students.

2021 legislation is the Tennessee Learning Loss Remediation and Student Acceleration Act (Act), the provision of funding to support summer learning programs and after-school learning camps, a proven strategy to support students. In 2023, the Act was amended to ensure that the proven strategy of summer learning programs would be in place long-term. In part, this was to support the pathway for fourth grade promotion which includes 90 percent attendance and demonstration of adequate growth during their summer learning program. 2023 was also the first year that extended programming to serve priority students rising into kindergarten and grade 9. The prioritization of student needs for additional academic instruction and ongoing support to address learning loss set Tennessee on the path to lead the nation in accelerating improvements in student outcomes.

In the years following the COVID-19 pandemic, Tennessee's schools have shown unrelenting commitment to helping students recover and accelerate learning. As shown by the [Spring 2023 Tennessee Comprehensive Assessment Program \(TCAP\)](#) results, there continue to be encouraging gains across all subject areas, with historic gains made in English language arts (ELA). In 2023, Tennessee saw the largest single-year increase in third graders meeting or exceeding expectations in ELA since 2017 and the largest percentage of third grade students scoring in the top performance category (exceeds expectations) in ELA in over a decade.

The Tennessee Learning Loss Remediation and Student Acceleration Act

The Tennessee Learning Loss Remediation and Student Acceleration Act (the Act), passed as part of Chapter 1 of the Public Acts of 2021, 1st Extraordinary Session, codified in Title 49, Chapter 6, Part 15 of the Tennessee Code, outlined clear and actionable steps to accelerate student learning in the wake of the Covid-19 pandemic. The same public chapter that included the Act also established guidelines, beginning with the 2022-23 school year, for retention of third grade students scoring "approaching" or "below" grade level on the ELA portion of the TCAP. Summer programs, in addition to tutoring services, serve as an opportunity for students in need of remediation to advance to fourth grade and ensure they are prepared for long-term success. The Act was further amended in Spring 2023 to expand grade levels served, offering programming for students in rising kindergarten through grade 9 indefinitely.

For 2023, the Act outlines two types of summer learning programs to be conducted locally:

- Summer learning camps and STREAM camps for students entering grades K-3
- (Summer) learning loss bridge camps for students entering grades 4-9

Through summer programs, each student receives at least four weeks of targeted support in ELA and mathematics. As defined in the Act, the requirement for summer learning camps (rising grades K-3) are a six-week program while requirements for summer learning loss bridge camps (rising grades 4-9) are a four-week program. Programming is required to be at least 5 days per week, 6 hours per day, with four hours spent on ELA and math, one hour of devoted daily time for intervention, and one hour daily of physical education. During intervention time, students work in very small groups to address individual gaps in standards and skills. Students in grades K – 3 participate in STREAM (science, technology, reading, engineering, the arts, and mathematics) mini-camp programming for at least one hour each day.

Each student received a full day of instruction, including targeted supports in ELA and mathematics, with devoted daily time for intervention and physical education.

All school districts are required to provide opportunities for their eligible students to attend summer programming. Public charter schools have the option to offer summer programming or offer enrollment to their students in the programs offered by a school district in their geographic area.

STREAM Programming

STREAM (Science, Technology, Reading, Engineering, Arts, and Math) Camp was passed into law as a required element of summer learning camps for rising grades K-3. The majority of districts (97 percent) staffed STREAM programming using the district's current teaching staff. Some districts hired specific teachers to teach only STREAM programming (35 percent), while others (60 percent) planned for teachers to teach across multiple subjects, including STREAM. A variety of curriculum choices for STREAM were implemented. Many districts used state-provided curriculum, some developed their own grade-appropriate lessons, and others incorporated STREAM content into themed ELA and math learning modules. Nearly all districts added STREAM to each summer learning camp day. Throughout this report, unless STREAM camp is reported separately from summer learning camp, assume that the same summer learning camp reporting also applies to STREAM camp.

*"We utilized a lot of hands-on learning. Students rotated between stations for STREAM activities. STREAM was many students' favorite part of summer programming."
- District Survey Participant*

Overall, districts' perceptions of the inclusion of STREAM were positive, with 92.7 percent agreeing or strongly agreeing that STREAM programming added value to the learning experience of students.

Testing and Reporting Requirements

In addition to requiring summer programming, the Act required school districts and participating charter schools to administer a department-provided pre-test and post-test to measure academic growth in ELA and math throughout the summer programming. Finally, the Act required the department to annually report on a variety of information about summer programming, including:

- A summary of enrollment and attendance
- A summary and interpretation of data generated from pre-tests and post-tests administered to students who participated in summer programs;
- An analysis and summary of how a teacher's overall level of effectiveness (LOE) score affected the academic performance of the students they instructed in summer programs. This data must be disaggregated by subject, grade level, and the type of summer program in which the teacher's services were provided; and
- Information identifying schools unable to adequately staff or conduct summer programs, including the reason why the school district or public charter school was unable to achieve adequate staffing. This data must be disaggregated by subject, grade level, and the type of summer program that the school district or public charter school was unable to adequately staff or conduct.

Project Funding & Budget

Beginning in 2023, districts were permitted to centrally budget summer programming dollars for all camp types (summer learning camps, summer learning loss bridge camps, and STREAM programming). In previous years, each district was given funding for each camp type and was required to budget each camp type separately. The use of one central budget more accurately reflected how districts budget locally and resulted in more accurate budgeting and cleaner spending. This also allowed districts additional flexibility to budget where funding was most needed. Transportation funding remained a separate budget outside of the budget for summer programming.

Having one budget for summer programming gave us the flexibility to put staff in needed areas. For example, our numbers aren't as big in the upper grades, so having one budget helped us to hire more staff for our lower grades to keep classes sizes smaller.

– Kim Dillon, Curriculum Supervisor, Overton County Board of Education

Summer Programs Enrollment and Attendance

In 2023, 142² districts offered summer learning programs, representing 96 percent of districts across the state. Districts were required to serve students through district-run programs or by partnering with other districts. Table 1 shows the enrollment number, percent of enrollment, and the average attendance rate by camp type, grade, and economically disadvantaged (ED) status. Overall findings regarding enrollment are:

- Overall, districts across the state enrolled 102,270 students across rising grades K-9. The greatest percentage of students enrolled in summer programs were in rising grades K-4 (70.6 percent).
- 40.6 percent ($n = 41,544$) were enrolled in summer learning camps (rising grades K-3) across 568 individual sites.
- 59.3 percent³ ($n = 60,651$) were enrolled in summer learning loss bridge camps (rising grades 4-9) across 730 individual sites.
- Rising grade 4 enrollments accounted for approximately 30 percent of all students enrolled, due in part to summer attendance as a pathway to 4th grade promotion as outlined by [T.C.A. 49-6-3115](#).

Overall findings about attendance are:

- The average attendance rate statewide was 65% (attended 65% of the total days of camp offered).
- The average attendance rate was slightly higher among the learning loss bridge camps for rising 4-9 graders (67.4 percent), in comparison with the summer learning camps for raising K-3 graders (61.5 percent).
- Across all grade levels, the rising fourth grade students had the highest average attendance rate (71.5 percent) while the rising third grade students had the lowest average attendance rate (60.7 percent).
- The average attendance rates were not discernibly different between economically disadvantaged and non-economically disadvantaged students, with two exceptions. The average attendance rate was higher among non-ED rising kindergarteners than ED-rising kindergarteners (9.6 percentage points higher) and was higher among non-ED-rising 9th graders than ED-rising 9th graders (5.6 percentage points higher).

² 142 districts represents all districts that provided summer programming during summer 2023. Districts that did not provide camps either do not academically serve students in grades K – 8 or partnered with local districts to have students served in neighboring districts.

³ 0.01% students, representing 75 students, are unaccounted for due to how data systems captured attendance, enrollment, and demographic information.

Table 1. Enrollment and Attendance by Camp Type and Grade

	Enrollment (count) ⁴	Enrollment Rate (%)	Average Attendance Rate (%)		
			All Students	ED Students ⁵	Non-ED Students
Total	102,270	--	65.0	66.0	64.5
Summer Learning Camps (Rising Grades K-3)	41,544	40.6	61.5	63.0	60.9
Learning Loss Bridge Camps (Rising Grades 4-9)	60,651	59.3	67.4	65.8	64.0
Rising Kindergarten	3,143	3.1	69.0	63.2	72.8
Rising Grade 1	12,153	11.9	61.3	63.5	60.2
Rising Grade 2	13,023	12.7	60.8	62.7	59.8
Rising Grade 3	13,225	12.9	60.7	62.7	59.6
Rising Grade 4	30,664	30.0	71.5	70.5	72.1
Rising Grade 5	9,435	9.2	61.6	63.7	60.4
Rising Grade 6	6,950	6.8	61.8	63.7	60.4
Rising Grade 7	5,867	5.7	65.2	67.6	63.5
Rising Grade 8	4,936	4.8	66.5	68.5	65.1
Rising Grade 9	2,799	2.7	62.5	65.8	60.2

Figure 1 shows the percentage of students meeting at least 90 percent attendance rate and the percentage of students who attended for less than 10 percent of available days (missing two days of a four-week program; or missing three days of a six week program) by camp type and student grade. Overall findings are:

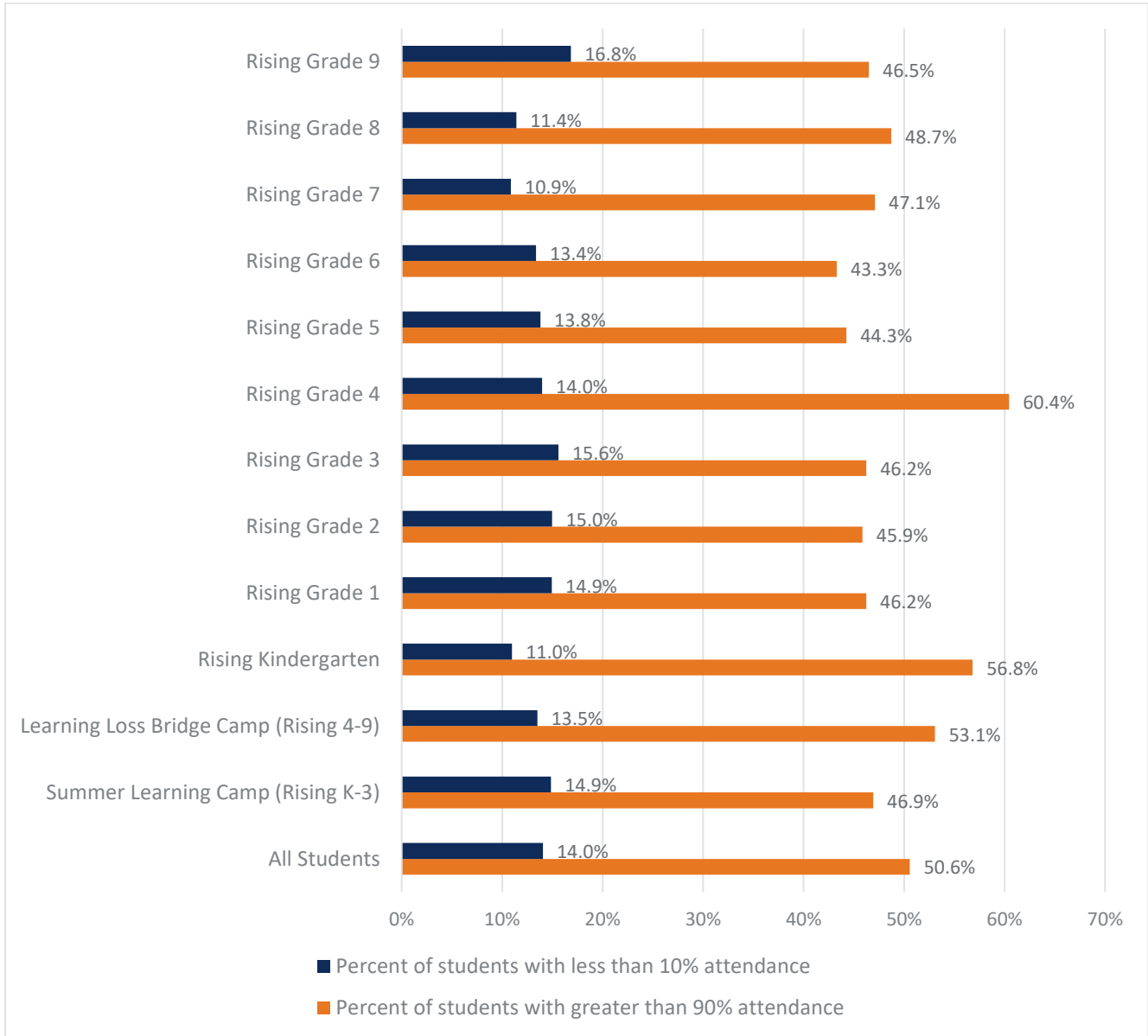
- Across the state, 50.6 percent of students attended at least 90 percent of program days, while 14.0 percent attended less than 10 percent of program days.
- The percentage of students who attended at least 90 percent of program days was higher for summer learning loss bridge camps (53.1 percent) than for summer learning camps (46.9 percent). This finding is possibly a result of the attendance requirement for rising grade 4 students who attended the camp as part of a grade 3 promotion pathway. As shown in Figure 1, the percentage of students who attended at least 90 percent of program days was the highest among the rising grade 4 students (60.4 percent).
- Across all grade levels, all grades had less than 50 percent of students who attended at least 90 percent of program days except rising grade 4 (60.4 percent) and rising kindergarten students (56.8

⁴ Grade assignment was unavailable for 0.07% of students.

⁵ ED status was unavailable for 1.6 percent of students.

percent). Rising grade 9 students had the highest percentage of students who attended less than 10 percent of program days (16.8 percent).

Figure 1. Percent of Students with Attendance Rate Greater than 90% and Less than 10% by Grade and Camp Type



As part of the summer programming evaluation survey, districts were asked specifically what level of concern they had with student attendance. For summer learning loss bridge camps (rising grades 4-9), 38.0 percent of districts reported some concern, while 13.9 percent of districts reported significant concern with attendance. For summer learning camps (rising grades K-3), 30.7 percent of districts reported some concern, while 10.9 percent of districts reported significant concern with attendance. Several districts offered additional information in the open response section of the survey. In general, districts shared that interest

in summer programming is lower among middle school students (rising grades 6-9) due to competing interests (e.g., recreational summer camps, sports, family vacations); thus, ensuring regular attendance is challenging.

Summer Programs Testing and Student Growth

The Act requires school districts and participating charter schools to administer a pre- and post-test to students as part of the summer programs. School districts and participating charter schools are then required to submit the results of all pre- and post-tests to the department by September 1st of each year. For 2023, student growth measures were updated from the 2022 versions based on feedback from districts. Thus, growth in summer 2023 is not directly comparable to summer 2021 or 2022 given the updated metrics.

This section reports findings regarding the extent to which summer programming improves student performance from pre-test to post-test⁶. When a positive change is observed, it is described as growth. Effect size is reported to present the magnitude of the change (i.e., small, medium, large) from pre-test to post-test. Cohen's d ⁷ is commonly used to report the effect size (ES) for pre- and post-test differences. In the educational literature⁸, an ES value of 0.25 or greater is educationally significant, and an ES value of 0.50 or greater is of practical significance. An ES value less than 0.25 is negligible, meaning the magnitude of change (increase or decrease) is minimal.

Additionally, student attendance is a significant factor associated with student growth⁹ and may serve as a proxy for other factors influencing student growth. It might be expected that, compared to students who attend more camp days, those who attend fewer camp days would demonstrate less growth. Therefore, an additional analysis was conducted to examine student growth among students who attended at least 50 percent of camp days.

Summer Learning Camps (Rising Grades K-3)

Legislation proposed by Governor Bill Lee and passed by the Tennessee General Assembly expanded summer program opportunities for 2023 to include rising kindergarten students. Pre-tests for rising kindergarten students were taken from either pre-K screeners or the Kindergarten Readiness Assessment used to provide data to schools on a student's level of readiness for kindergarten. Post-tests for rising kindergarten students were a repeat administration of the district-chosen screener. Due to the age of rising

⁶ Paired samples t-tests were performed to test the statistical significance of the difference between pre-test and post-test.

⁷ Cohen's d expresses the number of standard deviations between the pre- and post-test means. Cohen, J. 1988. *Statistical Power Analysis for the Behavioral Sciences*, 2nd Edition. Routledge

⁸ Wolf, F. (1986). *Meta-analysis: Quantitative methods for research synthesis*. Newbury Park, CA: Sage

⁹ Romero, M., and Lee, Y. (2007). *A National Portrait of Chronic Absenteeism in the Early Grades*. New York, NY: The National Center for Children in Poverty.

kindergarten students and considering that many students entered school for the first time during camp, kindergarten students were not given formal assessments. Thus, this report does not include a summary for rising kindergarten academic achievement or growth.

Math Outcomes. Rising grades 1-3 students in summer learning camps were given a paper-based math assessment, created by the department, focusing on the standards corresponding to the grade level completed during the 2022-2023 school year. Pre- and post-tests were scored by teachers, and scores were reported to the department. Scores are on a scale of 0-10. A lower rate of scores were reported for rising grades 1-3 as compared to grades 4-9, as the paper-based assessment required printing, scoring, and then reporting each pre- and post-test score.

Of all rising grades 1-3 students enrolled in summer learning camps ($n = 38,401$), 46.3 percent ($n = 17,791$) had a valid math pre-test with an average score of 4.9 ($SD = 2.9$), and 35.4 percent ($n = 13,578$) had a valid math post-test with an average score of 6.4 ($SD = 2.9$). When evaluating students who had a valid score for both the pre- and post-test ($n = 12,590$, 32.8 percent), growth in math scores was evident (mean difference = 1.5) with a practically significant effect ($d = 0.5$). Growth was also observed among individual grade levels from rising grade 1 to 3 with an effect ranging from educationally significant to practically significant (mean difference range: 1.3 to 1.5; d range: 0.48 to 0.50), as shown in Table 2. Examination of growth with students who attended at least 50% of the camp revealed similar findings with slightly higher effect sizes as presented in Table 3.

Table 2. Rising Grades 1-3 Math Growth: Overall and by Grade with Effect Size

	Number (%) of Students with Valid Pre- and Post-tests	Mean Difference in Math Score	Effect Size
Results including all students who attended the camp			
Rising Grade 1-3	12,186 (31.7%)	1.5***	0.50 practically significant
Rising Grade 1	3,902 (32.1%)	1.3***	0.48 educationally significant
Rising Grade 2	4,192 (32.2%)	1.6***	0.59 practically significant
Rising Grade 3	4,093 (30.9%)	1.6***	0.51 practically significant
Results including students who attended at least 50 percent of the camp			
Rising Grade 1-3	4,317 (19.8%)	1.6***	0.53 practically significant
Rising Grade 1	1,367 (19.6%)	1.4***	0.56 practically significant

	Number (%) of Students with Valid Pre- and Post-tests	Mean Difference in Math Score	Effect Size
Rising Grade 2	1,501 (20.3%)	1.7***	0.63 practically significant
Rising Grade 3	1,449 (19.4%)	1.6***	0.52 practically significant

*** $p < .001$

ELA Outcomes. Rising grades 1-3 students in summer learning camps were tested on ELA standards using the district-selected [universal reading screener platform](#)¹⁰ for their pre- and post-tests corresponding to the grade level completed during the 2022-2023 school year. Each universal reading screener platform calculates student growth using different measures and scales, limiting the ability to generate a standard growth measure across multiple platforms. Thus, reports for spring (pre-test) and summer (post-test) screener reports were provided as a normed percentile rank score¹¹ on a scale of 1 to 99, which provides the most consistent metric across multiple platforms. Growth, or a positive change in percentile rank from pre- to post-test, should be considered a shift in the relative position of students attending summer learning camp compared to a normative sample.

Of all rising grades 1-3 students enrolled in summer learning camps ($n = 38,401$), 46.3 percent ($n = 17,769$) had a valid pre-test with an average percentile rank of 33.9 ($SD = 26.5$) and 47.8 percent ($n = 18,369$) had a valid post-test with an average percentile rank of 34.3 ($SD = 26.6$).¹² When evaluating only students who had valid scores for both the pre- and post-test ($n = 17,769$, 46.3 percent), growth in ELA, measured by change in percentile rank, was positive with a negligible effect size for the overall group (mean difference = 0.8, $d = 0.01$) as well as for individual grade levels (mean difference range: -0.8 to 2.0; d range: 0.02 to 0.06), as shown in Table 3. Examination of growth with students who attended at least 50% of the camp revealed similar findings as presented in Table 3.

Table 3. Rising Grades 1-3 ELA Growth: Overall and by Grade with Effect Size

	Number (%) of Students with Valid Pre- and Post-tests	Mean Percentile Rank Change	Effect Size
Results including all students who attended the camp			
Rising Grade 1-3	17769 (46.3%)	0.8***	0.01 negligible

¹⁰ The State Board of Education approved the following qualified universal reading screeners (URS) on July 23, 2021: Tennessee Universal Reading Screener (aimswebPlus); DIBELS, 8th ed.; easyCBM; FastBridge Suite/FAST; iReady + iReady Early Reading Tasks; Measures of Academic Progress Suite; STAR Early Literacy.

¹¹ Percentile rank scores provide information about how an individual student performed in relation to a normed sample. For example, if a student scored in the 90th percentile, it means they scored better than 90% of students in the same grade and subject.

¹² Students with a percentile rank change equal or greater than 50 were considered outliers. About 1.8% of students meeting this criterion and their pre- and post-test scores were removed from the analysis.

	Number (%) of Students with Valid Pre- and Post-tests	Mean Percentile Rank Change	Effect Size
Rising Grade 1	5486 (45.1%)	-0.8***	0.04 negligible
Rising Grade 2	6261 (48.1%)	2.0***	0.06 negligible
Rising Grade 3	6022 (45.5%)	1.0***	0.02 negligible
Results including students who attended at least 50 percent of the camp			
Rising Grade 1-3	6,398 (29.3%)	0.9***	0.02 negligible
Rising Grade 1	2,037 (29.3%)	-0.4	0.03 negligible
Rising Grade 2	2,222 (30.1%)	2.0***	0.07 negligible
Rising Grade 3	2,036 (27.3%)	0.9**	0.01 negligible

*** $p < .001$, ** $p < .01$

Note that students in rising grades 1-3 have a negligible effect size for ELA. A negligible effect size means that there is very little or almost no practical difference between the pre- and post-test. Essentially, rising grade 1-3 students showed, on average, neither regression nor growth in ELA. This result may stem from the use of percentile rank metrics across seven different approved screeners, as discussed in the limitations.

Summer Learning Loss Bridge Camps

Rising grades 4-9 students enrolled in summer learning loss bridge camps were assessed using the TDOE ELA/math Checkpoint Assessment through *Schoolnet*. On this assessment, each question is aligned with Tennessee state standards and reviewed by Tennessee educators. The pre-tests and post-tests were designed to be efficient to administer by focusing on fewer, vertically aligned standards while also providing educators with meaningful and actionable information about student needs. The pre-test assessments utilized Tennessee Comprehensive Assessment Program (TCAP) questions from previous summative exams. For the 2023 post-test, the department created new, standard-aligned questions that approximated the same blueprints as the Spring 2023 TCAP assessment.

Math Outcomes. Of all rising grades 4-9 students enrolled in summer learning loss bridge camps ($n = 60,651$), 54.1 percent ($n = 32,798$) had a valid pre-test with an average score of 43.4 ($SD = 21.4$), and 52.3 percent ($n = 31,688$) had a valid math post-test with an average score of 43.8 ($SD = 22.4$). When evaluating students who had a valid score for both the math pre- and post-test ($n = 25,109$, 41.4 percent), growth in math was minimal with negligible effect sizes for the overall group (mean difference = 0.4, $d = 0.01$) as well as for individual grade levels (mean difference range: -2.7 to 2.0; d range: 0.01 to 0.15), as shown in Table 3. Examination of growth with students who attended at least 50% of the camp revealed a similar finding for

the overall rising grades 4-9 group as well as students in grades 4 to 8. However, growth in math for rising grade 9 students who attended at least 50 percent of the camp is evident (mean difference = 2.2) with an educationally significant effect ($d = 0.25$) as presented in Table 3.

Table 4. Rising Grades 4-9 Math Growth with Effect Size

	Number (%) of Students with Valid Pre- and Post-tests	Mean Difference	Effect Size	
Results including all students attended the camp				
Rising Grades 4-9	25109 (41.4%)	0.4***	0.01	negligible
Rising Grade 4	13536 (44.1%)	2.0***	0.09	negligible
Rising Grade 5	4228 (44.8%)	-2.0***	0.07	negligible
Rising Grade 6	2724 (39.2%)	-1.6***	0.06	negligible
Rising Grade 7	2086 (35.5%)	-2.7***	0.15	negligible
Rising Grade 8	1718 (34.8%)	-0.4	0.02	negligible
Rising Grade 9	802 (28.6%)	1.7**	0.14	negligible
Results including students attended at least 50 percent of the camp				
Rising Grades 4-9	11,906 (28.8%)	0.4***	0.02	negligible
Rising Grade 4	7,100 (33.4%)	1.8***	0.04	negligible
Rising Grade 5	1,821 (33.3%)	-2.5***	0.08	negligible
Rising Grade 6	1,154 (28.5%)	-1.2**	0.05	negligible
Rising Grade 7	853 (23.3%)	-3.0***	0.09	negligible
Rising Grade 8	681 (21.4%)	-0.8	0.01	negligible
Rising Grade 9	295 (17.6%)	2.2*	0.25	educationally significant

*** $p < .001$, ** $p < .01$, * $p < .05$, $p > .05$

Note that students in rising grades 4-9 have a negligible effect size from pre- to post-test in math. A negligible effect size means that there is very little or almost no practical difference between the pre- and post-test scores. Essentially, students with a negligible effect size showed, on average, neither regression

nor growth in math. Students in rising grade 9 showed an educationally significant growth in math, when analyzing only students who attended at least 50 percent of the program.

ELA Outcomes. Of all rising grades 4-9 students enrolled in summer learning loss bridge camps ($n = 60,651$), 54.2 percent ($n = 32,895$) had a valid pre-test with an average score of 34.6 ($SD = 17.5$) and 53.5 percent ($n = 32,478$) had a valid post-test with an average score of 41.1 ($SD = 20.6$). When evaluating students who had a valid score for both pre- and post- test ($n = 25,469$, 42.0 percent), growth in ELA was evident with an educationally significant effect (mean difference = 7.0, $d = 0.4$). The greatest growth was observed among rising grade 4 students with a practically significant effect (mean difference = 11.9, $d = 0.7$). Meaningful growth was also observed among rising grade 9 students with an educationally significant effect (mean difference = 4.8, $d = 0.3$), as shown in Table 5. Changes from pre-test to post-test for rising grades 5, 6, 7, and 8 students were minimal with negligible effect size (mean difference range: -2.4 to 2.1; d range: 0.02 to 0.11). Examination of growth with students who attended at least 50% of the camp revealed similar findings with slightly different effect sizes as presented in Table 3.

Table 5. Rising Grades 4-9 ELA Growth with Effect Size

	Number (%) of Students with Valid Pre- and Post-tests	Mean Difference	Effect Size
Results including all students attended the camp			
Rising Grades 4-9	25,468 (42.0%)	7.0***	0.40 educationally significant
Rising Grade 4	14,003 (45.7%)	11.9***	0.69 practically significant
Rising Grade 5	4,195 (44.5%)	1.5***	0.11 negligible
Rising Grade 6	2,725 (39.3%)	2.1***	0.10 negligible
Rising Grade 7	2,067 (35.2%)	-2.4***	0.09 negligible
Rising Grade 8	1,654 (33.5%)	0.4	0.02 negligible
Rising Grade 9	825 (29.5%)	4.8***	0.29 educationally significant
Results including students attended at least 50 percent of the camp			
Rising Grades 4-9	12,190 (29.4%)	7.5***	0.37 educationally significant
Rising Grade 4	7,400 (34.8%)	11.9***	0.64 practically significant
Rising Grade 5	1,819 (33.2%)	1.4***	0.10 negligible

	Number (%) of Students with Valid Pre- and Post-tests	Mean Difference	Effect Size	
Rising Grade 6	1,157 (28.5%)	1.4***	0.06	negligible
Rising Grade 7	849 (23.1%)	-2.8***	0.08	negligible
Rising Grade 8	660 (20.7%)	0.8	0.09	negligible
Rising Grade 9	301 (18.0%)	5.3***	0.34	educationally significant

*** $p < .001$, ** $p < .01$, * $p < .05$, $p > .05$

Note that students in rising grades 5-8 have a negligible effect size for ELA. A negligible effect size means that there is very little or almost no practical difference between the pre- and post-test scores. Essentially, students with a negligible effect size showed, on average, neither regression nor growth from pre- to post-test in ELA. Rising grade 4 has a practically significant effect and rising grade 9 has an educationally significant growth for ELA. Rising grade 4 and rising grade 9 students showed, on average, measurable improvement in ELA achievement resulting from summer programming.

Teacher Effectiveness and Student Academic Performance

To evaluate how a teacher’s overall level of effectiveness (LOE) was related to student academic performance, the department compared the available LOE¹³ scores of camp teachers to their student’s performance on the pre- and post-tests administered for each camp type and by grade level. It should be noted that Summer camp teachers may not have LOE scores if they are partial year employees, substitute teachers, new teachers in 2022-23, or Educator Preparation Provider (EPP) candidates. Of the 9,309 teachers recorded for summer 2023, LOE scores were available for 62.9 percent ($n = 5,857$) and the average LOE score was a 4.1 on a scale of 1-5 ($SD = 0.9$). For those teachers with LOE data, the majority ($n = 5607$; 95.7 percent) had a LOE of three or greater and 78.1 percent ($n = 4575$) had LOE of 4 or greater. Fewer than ten teachers had a LOE of 1 (approximately 0.2%); thus, data for teachers with an LOE of 1 is suppressed when appropriate, following department reporting guidelines.

After linking teacher LOE scores with student test scores, LOE scores were available for 55.1 percent of all testing data across camp type. For rising grades 1-3, LOE was assigned based on the teacher of record for summer class enrollment. An average LOE score was used for classes with multiple teachers of record. LOE was available for 62.5 percent of math test records and 66.0 percent of ELA test records for rising grades 1-

¹³ The most recent overall level of effectiveness (LOE) was used in the analysis of the academic performance of the students they instructed in Summer Camps. For this report, 2021-22 LOE were utilized. LOE scores were not available for teachers employed for the first time in 2022-2023 or for partial-year employees.

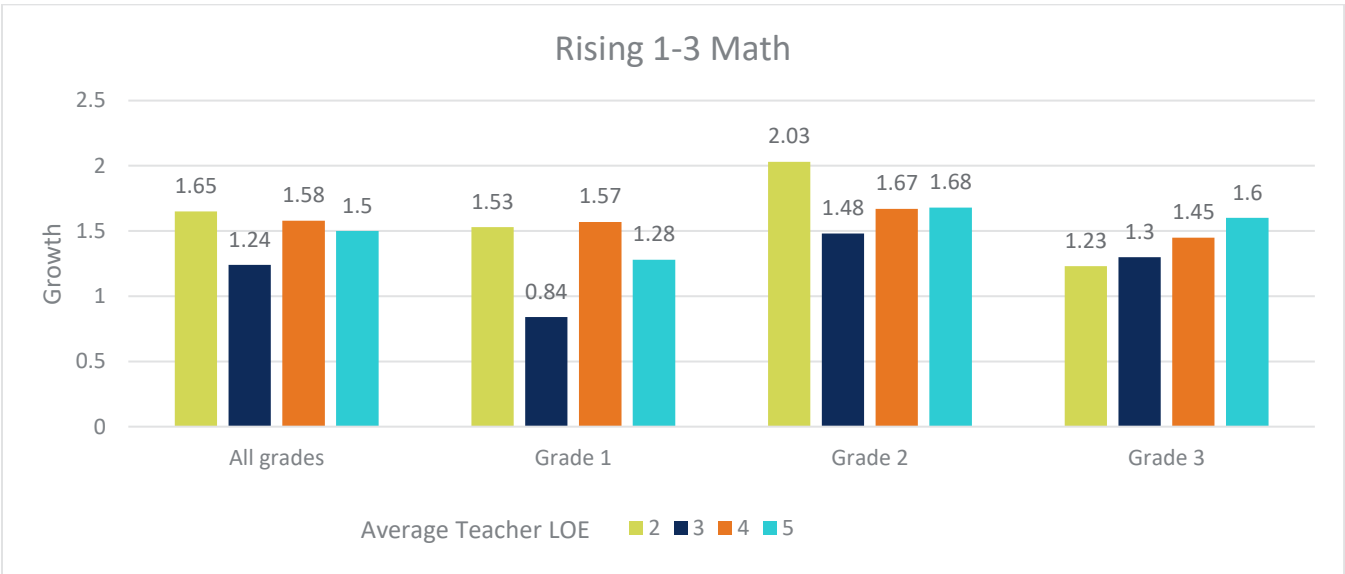
3. For rising grades 4-9, LOE was assigned based on the teacher of record on the post-test. LOE was available for 49.5 percent of math and ELA data for rising grades 4-9.

To understand the relationship between teacher LOE score and student growth, a series of multilevel models¹⁴ were conducted to test the statistical significance of the relationship by camp type, subject, and grade level. In multilevel model, beta (B) represents the relationship of interest and *p* value is interpreted for statistical significance of the relationship. Findings are reported in the following sections.

Summer Learning Camps

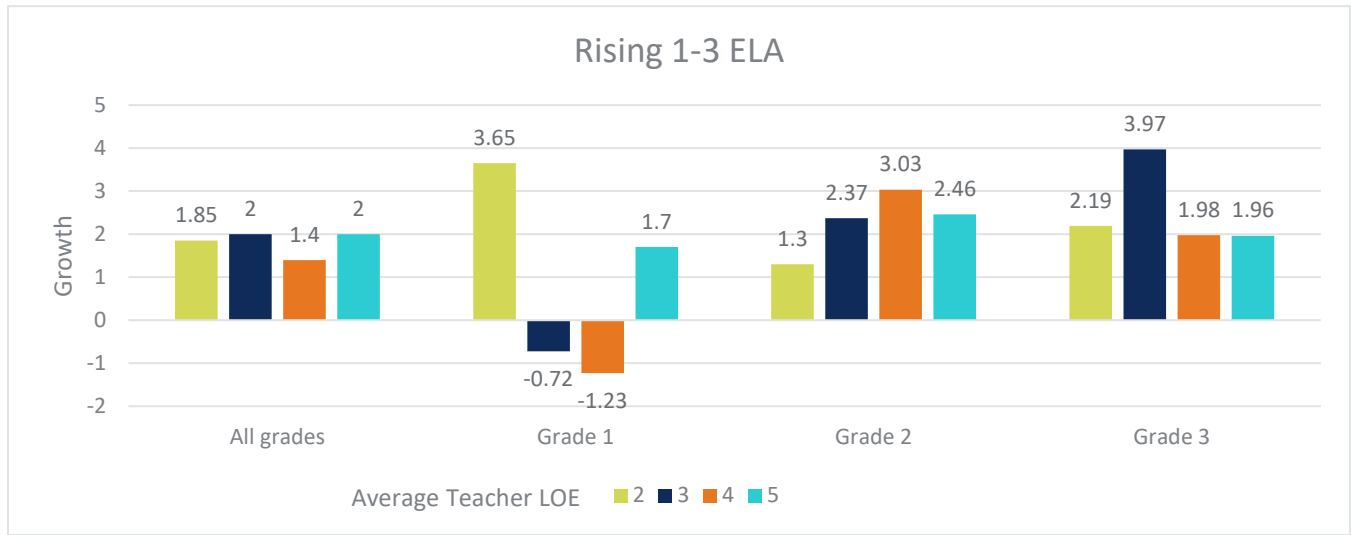
Figures 2 and 3 show the average growth in math and ELA by teacher average LOE score overall and by grade level for the summer learning camps (rising grades 1-3). As shown in Figures 2 and 3, there is no clear relationship between teacher LOE score and student growth score in math or ELA for the overall rising grades 1-3. However, there seems to be a positive relationship among 3rd grade students.

Figure 2. Rising Grades 1-3 Math Growth by Average Teacher LOE



¹⁴ The following covariates are entered in the model to control for factors that may impact student growth: attendance, minority race status, economically disadvantaged status, special education (IEP) status, English learner status.

Figure 3. Rising Grades 1-3 ELA Growth by Average Teacher LOE



Multilevel analyses were conducted to exam the statistical significance of the relationship between teacher LOE score and growth by subject overall and by grade level. Key findings are presented in Table 7 and summarized below:

- The average teacher LOE score is statistically, positively associated with rising grades 1-3 students’ math score.
- The average teacher LOE score is statistically, positively associated with rising grade 1 students’ ELA score.

Table 7. Relationship between Teacher LOE Score and Growth for Rising Grades 1-3 by Subject: Overall and by Grade Level

	Teacher LOE Score			B (Correlation Coefficient)
	Mean	Min	Max	
Math				
Overall Rising Grades 1-3	4.3	2	5	0.12*
Rising Grade 1	4.4	2	5	0.13
Rising Grade 2	4.2	2	5	0.13
Rising Grade 3	4.3	2	5	0.16
ELA				
Overall Rising Grades 1-3	4.3	2	5	0.18
Rising Grade 1	4.4	2	5	1.40*
Rising Grade 2	4.2	2	5	0.11
Rising Grade 3	4.2	2	5	-0.59

* $p < .05$

Summer Learning Loss Bridge Camps

Figures 4 and 5 show the average growth in math and ELA by teacher LOE score overall and by grade level for the summer learning loss bridge camps (rising grades 4-9). As shown in Figures 4 and 5, overall, there seems to be a positive relationship between teacher LOE score and student growth score in math or ELA for the overall rising grades 4-9, and such relationship seems to be consistent across all grade levels. Although students in rising grades 5 to 8 seemed to show a decrease from pre-test to post-test in math, those students taught by teachers with a higher LOE showed less regression. A similar pattern is also observed for ELA, as shown in Figure 5.

Figure 4. Rising Grades 4-9 Math Growth by Teacher LOE

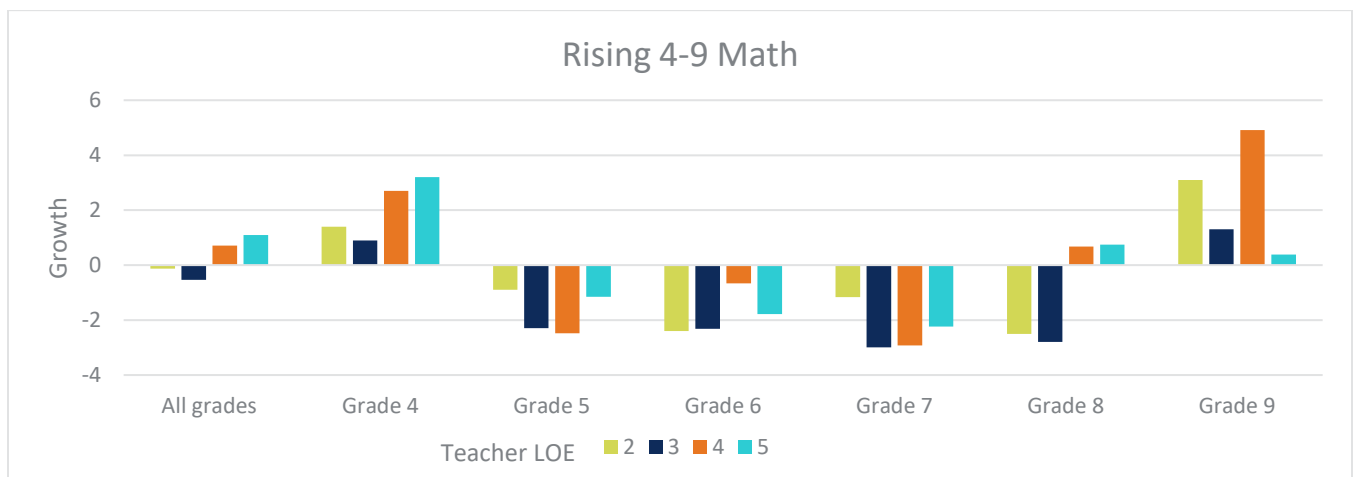
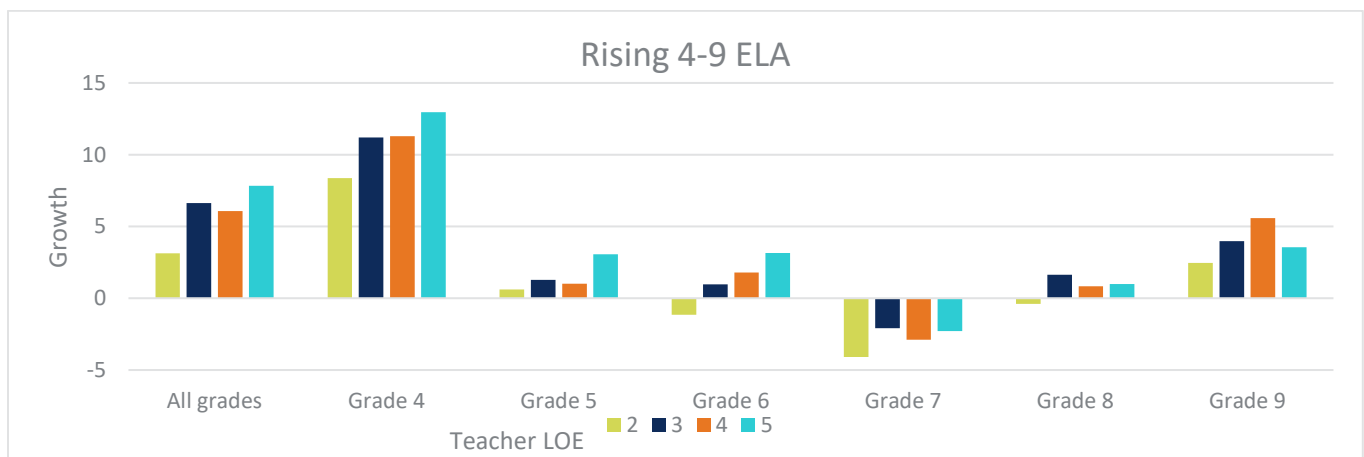


Figure 5. Rising Grades 4-9 ELA Growth by Teacher LOE



Multilevel analyses were conducted to exam the statistical significance of the relationship between teacher LOE score and growth by subject overall and by grade level. Key findings are presented in Table 8 and summarized below:

- Teacher LOE score is statistically positively associated with rising grades 4-9 students' math growth; this positive relationship is also observed among rising grade 4 and rising grade 8 students' math growth.
- Teacher LOE score is statistically positively associated with rising grades 4-9 students' ELA growth; this positive relationship is also observed among rising grade 4 students' ELA growth.

Table 8. Relationship between Teacher LOE Score and Growth for Rising Grades 4-9 by Subject: Overall and by Grade Level

	Teacher LOE Score			B (Correlation Coefficient)
	Mean	Min	Max	
Math				
Overall Rising Grades 4-9	4.0	1	5	0.81**
Rising Grade 4	4.0	2	5	0.75*
Rising Grade 5	4.1	1	5	0.45
Rising Grade 6	4.0	1	5	0.29
Rising Grade 7	4.0	2	5	-0.11
Rising Grade 8	4.0	1	5	1.80**
Rising Grade 9	3.9	2	5	-0.71
ELA				
Overall Rising Grades 4-9	4.0	1	5	0.81**
Rising Grade 4	4.0	2	5	0.93**
Rising Grade 5	4.1	1	5	0.85
Rising Grade 6	4.0	1	5	0.36
Rising Grade 7	4.0	2	5	0.20
Rising Grade 8	4.0	1	5	0.37
Rising Grade 9	3.9	2	5	0.60

** $p < .01$, * $p < .05$,

Summer Programs Staffing

The Act also requires the department to report on school districts' ability to adequately staff summer programs. Specifically, the Act requires the department to report:

- Information identifying schools unable to adequately staff or conduct summer learning camps- including the reason why the school district or public charter school was unable to achieve adequate staffing. This data must be disaggregated by subject, grade level, and the type of summer learning camp that the school district or public charter school was unable to adequately staff or conduct.

Districts and participating charter schools were required in the law to prioritize staffing summer programs with teachers properly licensed and endorsed to teach the subjects and grades served. If schools could not find a properly licensed and endorsed teacher, they could staff a teacher who was licensed but did not hold the proper endorsement or staff the summer programs with a teacher candidate enrolled in an educator preparation provider (EPP). Finally, if none of the above were available, schools could staff summer learning camps with a person with a college degree who successfully completed a summer learning camp preparation course developed and offered by the department.

To identify staffing challenges, the department developed an electronic survey and shared the survey with all school districts¹⁵. The department requested the director of schools (or a designee/representative) for each district to complete the survey. Additionally, the survey could be completed by a school building administrator, summer program coordinator, or other district representative. Of the 142 districts that offered summer programming, 137 districts (96.5 percent) returned the completed survey.

The department defined adequate staffing for districts in several ways including: districts had sufficient staffing to implement camps as intended, teaching staff were qualified (i.e., licensed or endorsed), and all eligible students in the district who wanted to enroll could enroll. The majority of districts (at least 87.0 percent) reported that staffing issues were not a concern in 2023 for either summer learning Camps (rising grades K-3) or summer learning loss bridge camps (rising grades 4-9). For districts that did report concerns, the most commonly reported concern was that the district did not have sufficient staff to implement camps as they had intended. Figure 6 represents districts' level of agreement with the statement: "Our district had sufficient staffing to implement the camps as intended." For summer learning loss bridge camps (rising grades 4-9), 10.8 percent of districts disagreed or strongly disagreed with this statement, and 12.2 percent of districts disagreed or strongly disagreed with summer learning camps (rising grades K-3). In comparison, most districts agreed or strongly agreed that faculty/staff were qualified to teach camps for summer learning camps (97.3 percent) and summer learning loss bridge camps (99.3 percent).

In a separate set of questions, districts were asked the level of concern the district faced with regard to the following staffing issues: availability of program, school, or district administrators; availability of administrative support staff; availability of operational staff, such as cafeteria workers and bus drivers; availability of alternative educators, such as EEP candidates; availability of substitute teachers or staff; staff to student ratio; and qualifications of teaching staff. As displayed in Figure 7, overall concerns regarding staffing were more prevalent for summer learning loss bridge camps serving rising grades 4-9 than for summer learning camps serving rising grades K-3. However, staffing concerns regarding operational staff, administrative staff, and administrators were similar across both camp types. Of note is that one-fifth or

¹⁵The Department only surveyed school districts because Summer Camps are optional for charter schools according to the law. Students who attended charter schools could attend either a Summer Camp offered by their charter school or could attend Summer Camps offered by school districts in their geographic area.

more of districts reported staffing concerns regarding operational staff (e.g., cafeteria workers, bus drivers), substitute teachers, and alternative educators (e.g., EEP candidates).

Figure 6. Adequate Staffing for Rising K-3 and Rising 4-9 Summer Camps (n = 137)

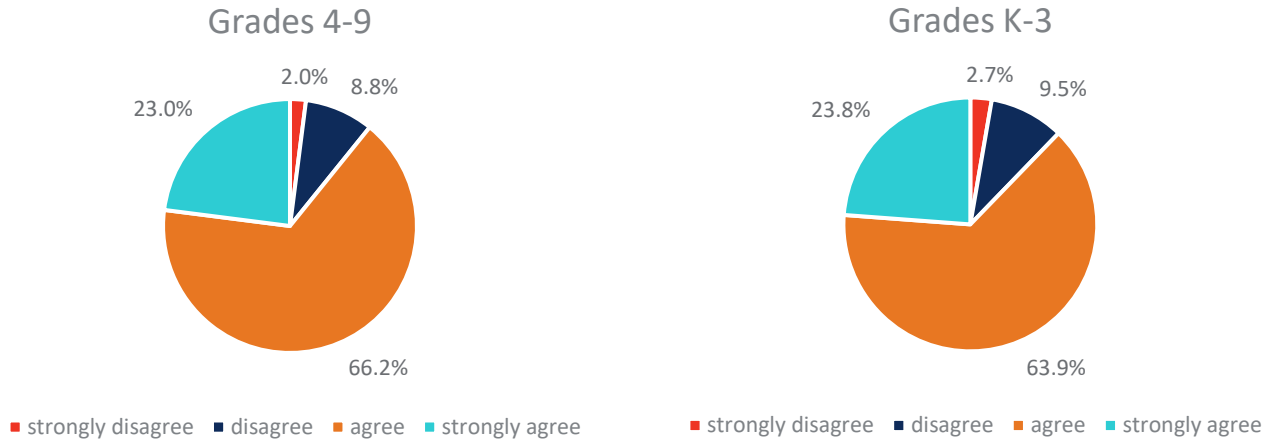
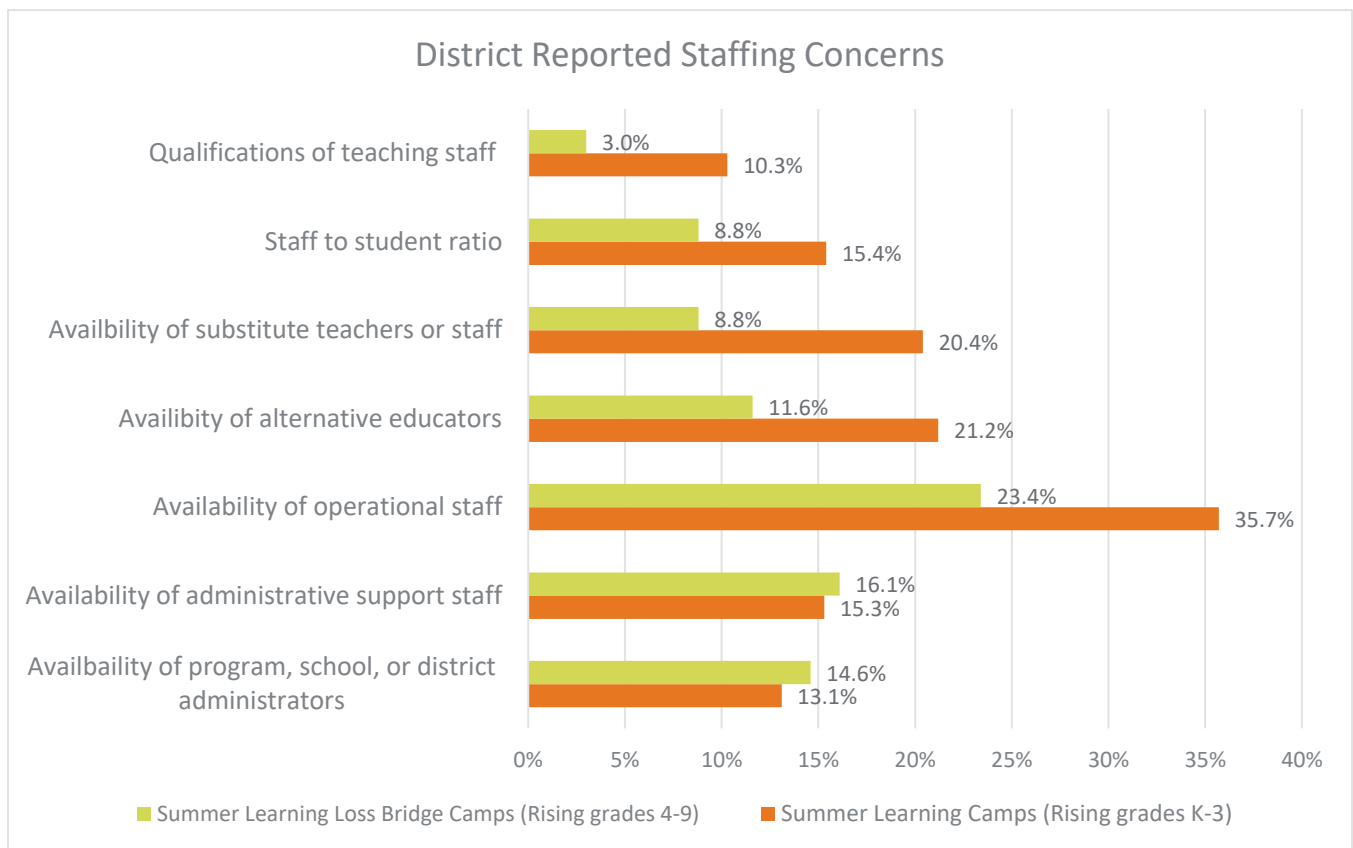


Figure 7. District Concerns on Staffing Issues by Camp Type (n = 137)



Districts also had the opportunity to share with the department the reasons they felt they could not adequately staff their summer programs. Districts highlighted the availability of teachers and the timing of funding as two main barriers to adequately staffing camps. The majority of districts reported that their concerns were similar across the entire camp (79.5 percent of rising grades K-3 responses and 69.0 percent of rising grades 4-9 responses), although some districts highlighted individual grades as presenting challenges. Specifically, districts shared that summer school staffing is generally challenging although it can be especially difficult to find enough qualified teachers for rising grades K-1 and 7-9. To address this issue, districts depended on teaching assistants and had lower-grade teachers staff upper grade classrooms. Another creative strategy used by districts was to rotate teachers, contracting staff for a shortened teaching term rather than having a single teacher for the program. Furthermore, a delay in the funding element for summer programming required districts to delay contracting teachers until later in the school year, which limited teacher availability. Several districts reported specific concerns with rising grade 4 students. Many of these concerns were due, in part, to the uncertainty regarding which rising grade 4 students would need to attend summer school as a pathway to grade promotion and the shifting enrollment numbers that resulted from the process of early identification, TCAP retakes, and parent waivers.

Conclusion

Tennessee’s summer learning camps and summer learning loss bridge camps are part of a strategic plan to prioritize educational investments and improve outcomes for students. School districts, educators, and other stakeholders have put forth notable efforts to plan programming, engage families, and encourage enrollment and attendance for all students eligible and in need of summer programming. Across the state, 102,270 rising grade K-9 students were enrolled in 1,298 camp sites across 142 districts, and more than half had an attendance rate equal or greater than 90 percent. Across all grade levels, the rising fourth grade students on average had the highest attendance rate of 71.5 percent, and 60.4 of the rising fourth grade students attended at least 90 percent of the camp days.

The efforts of districts in summer programming resulted in meaningful growth for the rising grade 1-3 students’ math outcomes (practically significant effect) and rising grade 4-9 students’ ELA outcomes (educationally significant effect).

When examining the growth by grade level, meaningful growth was observed among rising grades 1, 2, and 3 in math and among rising grades 4 and 9 in ELA. The magnitude of growth was slightly greater when restricting the sample to only students who had attended at least 50 percent of the camp. Additionally, for rising grade 9 students, growth in math became evident with the restricted sample—meaningful growth was observed among students who attended at least 50 percent of camp (educationally significant effect) while there was no evidence of growth when attendance was not considered in the analysis (negligible effect size).

“K-3 Summer Learning Camps are a fantastic opportunity to close learning gaps early.” – District Representative

Student growth in math and ELA may be partially explained by districts' strategic planning in staffing effective teachers in the summer learning programs. Overall, 63.1 percent of the summer camp teachers had a valid LOE score, and the average LOE score was 4.1 on a scale of 1-5). Examining the relationship between teacher LOE scores and student growth revealed that students tend to demonstrate greater growth when they are taught by teachers with higher LOE scores. Such relationship was evident among rising grades 1-3 students' math growth and rising grades 4-9 students' math and ELA growth. This positive relationship was also observed among individual grade levels, including rising grade 1 students' math growth, rising grade 4 students' math and ELA growth, and rising grade 8 students' math growth.

In 2023, many rising grade 4 students were at risk of retention under the law and attended summer learning loss bridge camp as part of a pathway to promotion to fourth grade. Of all students enrolled in summer programs, 30 percent were rising grade 4 students. Districts' efforts to support rising grade 4 students were observed in this report, specifically for attendance and student growth. Attendance was highest for rising grade 4 students compared to all grade levels. This group also demonstrated the greatest growth in both math (negligible effect size) and ELA (practically significant effect) compared to other grades in summer learning loss bridge camps (rising grades 4-9). At the same time, the focus on rising grade 4 students created some challenges for districts with regard to staffing and summer planning given the uncertainty around enrollment numbers and the timing of spring TCAP retakes and parent waivers for fourth grade promotion.

For 2023, most districts reported that their teachers were qualified to teach summer camps. Similarly, districts reported having adequate teaching staff to implement camps, although concerns regarding the availability of operational staff, such as cafeteria workers, bus drivers, and substitute teachers were reported.

Additional Considerations

There were notable limitations to the data and analysis that should be considered when interpreting the results included in this report. First, some students were enrolled in summer programming but did not choose to attend, which impacts both overall enrollment estimates and percentages of valid tests reported. Second, valid testing data was missing within each grade band for various reasons, including district reporting errors, testing system errors, and URS reporting issues. Third, growth is not directly comparable between years (e.g., 2022 and 2023) or between grades (e.g., rising grades 3 and 4). Between 2022 and 2023, the department adjusted testing metrics based on district feedback, limiting direct comparisons in growth from year to year. Additionally, rising grades 1-3 testing data for ELA and math are reported on a different scale than rising grades 4-9 testing data. For rising grades 1-3 specifically, the differential scales of the individual URS screeners necessitated transforming scores to percentile rank for meaningful comparison; however, percentile rank change as a measure of growth is

less precise and more difficult to interpret compared to differences in scale scores. The department continues to work internally and with districts to improve data quality for future reporting.