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APPENDIXES
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Examining Implementation and Outcomes of the Project On-Track High-Dosage Literacy Tutoring Program

Appendix A. Methods

Appendix B. Qualitative case studies

Appendix C. Supporting analyses

See https://ies.ed.gov/ncee/rel/Products/Region/appalachia/Publication/108132 for the full report.

Appendix A. Methods

This appendix provides further details about the sample, data, and analysis methods used to conduct the study.

Sample

The study team relied on a primary sample of schools, tutors, and students to answer the study research questions. To provide context for study findings, the study team also collected qualitative data from a sample of Project On-Track site coordinators and school or district leaders.

Primary sample used to address research questions. The study team gathered quantitative data from Project On-Track staff for all schools that implemented the literacy program in grades 1-3 during the 2022/23 school year to address the three research questions. This dataset included 1,365 students in 60 schools. Tutor qualification data were missing for 4 schools, so they were dropped from the analytic sample. As a result, the analytic sample included 1,126 students in 56 schools—83 percent of the students and 93 percent of the schools in the original sample. The beginning-of-year Dynamic Indicators of Basic Early Literacy Skills (DIBELS) scores for the excluded schools were not significantly different from those for the analytic sample ($t(363.48) = 1.78$, $p = .076$), but the excluded schools had more students in lower grades than the analytic sample did ($\chi^2(2) = 20.45$, $p < .001$). In addition, for some students some data were missing for three demographic variables: race/ethnicity, receiving special education services, and receiving multilingual learner supports (table A1). That reduced the total sample size for analyses to address research questions 1 and 2 that involve these variables (e.g., descriptive statistics for these variables, and analyses examining the association between these characteristics and implementation features).

The percentage of students with nonmissing data fell below the 85 percent threshold specified in National Center for Education Evaluation and Regional Assistance (2022) guidance. To estimate the extent to which missing student data might bias the analyses, the study team compared the primary analytic sample ($n = 1{,}126$) with the original sample ($n = 1{,}365$) on two key variables that were not missing for any members of the original sample:

student beginning-of-year DIBELS score and grade level (table A2). For both these key variables, the difference between the original sample and the analytic sample was small.

Table A1. Response rates for each study variable, 2022/23

Variable	Original sample	Analytic sample	Percent with nonmissing data
School-level variable			
All (frequency of tutoring, tutor qualifications, rurality, school size, prior school performance)	61	56	93
Student-level variable			
Key variables: beginning-of-year and end-of-year DIBELS scores, grade, timing of tutoring[a]	1,365	1,126	83
Race/ethnicity	1,365	1,036	76
Receiving special education services	1,365	1,005	74
Receiving multilingual learner supports	1,365	959	70

DIBELS is Dynamic Indicators of Basic Early Literacy Skills.

a. Although most schools offered tutoring either during school or outside of school hours, some schools offered tutoring at both times. In these schools, students were scheduled to receive tutoring during just one time of day (either during school or outside of school hours). The study was able to obtain data on the timing of scheduled tutoring for each student. As a result, unlike the other implementation approaches, timing is a student-level variable.

Source: Analysis of data provided by Project On-Track staff.

Table A2. Comparison of original student sample and analytic student sample, 2022/23

	Original sample (n = 1,365)		Analytic sample (n = 1,126)		Difference (standard deviation units)
Variable	Mean	Standard deviation	Mean	Standard deviation	
Beginning-of-year DIBELS score	317	17.5	317	17.7	0.0
Grade level	2	0.8	2	0.8	-0.1

DIBELS is Dynamic Indicators of Basic Early Literacy Skills.

Source: Analysis of data provided by Project On-Track staff.

The study sample did not include all students who participated in Project On-Track. Project On-Track schools discontinued tutoring for students who were deemed to have made sufficient progress, and Project On-Track schools did not collect end-of-year DIBELS data for these students. Although it is clear that these students made positive gains, it is impossible to know the extent of their literacy growth. It is also possible that students left the program for reasons other than because they made sufficient progress in their literacy skills (e.g., moving out of the school or parents withdrawing the students from the program), but these reasons are not so clearly associated with student progress.[1] Thus, while the study team knows that schools discontinued tutoring for students who made the most literacy progress, the team can only speculate that some students left for other reasons. As a result, the study team assumed that the routine practice of discontinuing tutoring for students who made

[1] There is no reason to assume that student growth in literacy skills would be associated with a family's decision to move a student to a new school. Similarly, parents might choose to withdraw their children from a tutoring program for any number of reasons that could be assumed to be associated with either high or low student performance. Parents might withdraw a student because they determined, before the school did, that the student had made enough progress to no longer benefit from the program. Alternatively, parents might withdraw their children if they complained about participating in tutoring.

sufficient progress was likely to bias the findings more than student departure from the program for other reasons. Thus, the team concluded that all analyses conducted for this study likely underestimate the progress that students made overall.

To reduce the bias introduced by discontinuing tutoring before the end of the school year for students deemed to have made sufficient progress, the study team limited its analyses for research question 3 (on how much progress students made in their literacy skills) to the subgroup of students most at risk for reading difficulties. These students were identified as those who scored in the at risk category on the beginning-of-year DIBELS assessment (see data section for more details on the DIBELS). The study team assumed that this group of students would be the least likely to leave the program. Because these students started the year the farthest behind grade level, they would need to make considerable progress before achieving the literacy level at which schools would discontinue tutoring. The sample size for these analyses was 622 students in 54 schools. Although demographic variables were missing for some of these students, the sample size was not reduced for these analyses; instead, an analysis method was used that allows for missing student-level data (see analysis methods section below).

Qualitative sample. The study team conducted semistructured interviews in six schools to provide context for the study findings. The team identified the schools after gathering input from Project On-Track staff. Project On-Track staff nominated nine schools that varied in program implementation approaches and other school contexts. For each school, Project On-Track staff detailed the following characteristics: timing of tutoring, tutor qualifications, grade levels served, total school enrollment, and rurality. The study team selected six schools from among those nominated to represent a variety of implementation approaches and contexts (see appendix B for more information on selected schools).

Data

The study relied on six types of data.

Timing and frequency of tutoring. Project On-Track staff supplied data on the scheduled timing and frequency of tutoring from program records. Timing of tutoring refers to whether a student was scheduled to receive tutoring during school or outside of school hours (before or after school). While most schools offered tutoring either during school or outside of school hours, 11 percent of schools offered both options (see figure 1 in the main report), although students were assigned to receive tutoring during just one time of day (during school or outside of school hours). This variable was measured at the student level and reflects when each student was scheduled to receive tutoring.

Frequency refers to the number of days tutoring was offered at the school and was measured at the school level. Frequency reflects the planned tutoring schedule for all students at each school. The study team divided schools into two categories based on tutoring frequency: schools that offered tutoring two days a week, which was the minimum frequency required by Project On-Track, and schools that offered tutoring more frequently. The study team was unable to collect attendance data. It is likely that at least some students were absent for some tutoring sessions.

Tutor qualifications. Project On-Track staff collected information about tutor qualifications through an online survey. Tutors indicated whether they were a certified teacher, assistant/paraprofessional, retired teacher, school or district administrator, or college student. The survey included space for additional information if tutors did not fit into one of the offered categories. Within a school, tutors could have different qualifications (for example, a school with three tutors might have one who was a certified teacher, one a retired teacher, and one an assistant/paraprofessional). To characterize the tutor qualifications at the school level, the study team

calculated the percentage of tutors at each school who were teachers, administrators, or paraprofessionals (that is, the percentage of teachers, administrators, or paraprofessionals is equal to the number of certified teachers, retired teachers, administrators, and paraprofessionals divided by the total number of tutors). Schools were categorized into one of two groups based on this percentage: schools that used only teachers, administrators, or paraprofessionals as tutors and schools that used at least some tutors who were not teachers, administrators, or paraprofessionals.

Student early literacy level. Tutors administered the DIBELS at the beginning and end of the school year during assessment windows established by Project On-Track staff. DIBELS, a widely used assessment of early literacy skills, includes six subscales: letter naming fluency, phonemic segmentation fluency, nonsense word fluency, word reading fluency, oral reading fluency, and maze (a measure of reading comprehension). The six subscales assess four of the five key constructs in reading identified by the National Reading Panel (2000): phonological awareness, phonics/alphabetic principle, fluency, and comprehension; vocabulary is the only key construct not measured (University of Oregon, 2020).

The DIBELS composite score is a weighted combination of the six subscales, derived from confirmatory factor analyses (University of Oregon, 2020). The composite score is scaled to a mean of 400 and a standard deviation of 40 for each grade level. DIBELS norms are based on data from a sample of more than 11,000 students in grades K–8, including over 8,000 students in grades K–4. Students in the norming sample resided in a mix of locales (rural, town, suburban, urban) in 17 states across the United States. The publishers of the DIBELS have also developed criterion-referenced goals for each grade level, with cutpoints that define four categories of risk for reading difficulty (negligible risk, minimal risk, some risk, and at risk). Reported median test–retest reliability coefficients for the subtests in grades K–3 range from 0.7 to 0.9.

Student demographic characteristics. Districts provided the following demographic data about students to Project On-Track staff: grade level, reported race/ethnicity, receipt of multilingual learner supports, and receipt of special education services. Districts also provided Project On-Track staff with common student identifiers so that demographic data could be linked to the DIBELS assessment data. The study team provided the Project On-Track team with a list of study-specific identifiers. After Project On-Track staff linked the data to these study-specific identifiers, they deleted the district common student identifiers to protect student anonymity.

School characteristics. The study team examined the rurality of participating schools using information about schools' locale (city, town, rural) from the Common Core of Data (National Center for Education Statistics, 2021/22). All schools that were in cities, towns, and suburbs were considered to be nonrural in the analysis.

The study team collected data on students' previous academic performance from the Tennessee Department of Education. Analyses for research question 3 included the percentage of students in grades 3–5 who scored proficient on the 2022 English language arts subject-area test of the Tennessee Comprehensive Assessment Program.

Interviews. The study team conducted semistructured interviews with instructional leaders and site coordinators in six Project On-Track schools.[2] The interview protocols probed specifically for some of the challenges that Project On-Track staff reported anecdotally (for example, recruiting and retaining qualified tutors and student attendance during tutoring sessions) and invited respondents to share other details about how Project On-Track was implemented in their school over the last year (box A1).

[2] In total, the study team conducted five interviews using the instructional leader interview protocol and seven interviews using the site coordinator protocol.

Box A1. Interview protocols for instructional leaders and site coordinators

Instructional leader interview protocol

1. How long has Project On-Track been implemented at your school?
2. Why did you decide to participate in Project On-Track?
3. Please describe how Project On-Track is implemented at your school. [*Probe for: during school vs. after school; frequency and length of tutoring sessions; tutor qualifications; how the Amplify Reading games are incorporated during tutoring sessions; what grade levels are served*].
4. What factors influenced your choices about how Project On-Track is implemented? [*Probe for: research or evidence-based practices, specific school context and student needs, logistics, available resources*].
5. Did you consider any other implementation approaches (for example, if your school is implementing Project On-Track during school, did you ever consider implementation after school)?
6. We know many schools have more students that need literacy supports than can be served by Project On-Track. How did you decide which students to serve through Project On-Track? [*Probe for: serving the lowest-performing students, serving students who are on the verge of proficiency, teacher recommendations*]. What other early literacy supports are available to students who aren't participating in Project On-Track?
7. Is there anything else you'd like to share with us about your experience with Project On-Track?

Site coordinator interview protocol

1. How long have you served as a site coordinator for Project On-Track? What was your background before you became a site coordinator?
2. We understand that this school implements Project On-Track in the following ways: [During school vs. after school; frequency and length of tutoring sessions; tutor qualifications; how the Amplify Reading games are incorporated during tutoring sessions; what grade levels are served]. Is this correct? Are there any other important implementation features that we should be aware of?
3. How has implementation been going? Have you experienced any challenges with implementation this year? [*Probe for: challenges with student attendance; scheduling tutoring sessions; incorporating Amplify Reading games during tutoring sessions; identifying, recruiting, or retaining highly qualified tutors; training or supporting tutors; meeting the needs of students in different grade levels*].
4. How have you tried to address those challenges?
5. We understand that students at this school are selected to participate in Project On-Track using the following approach: [Serving the lowest-performing students, serving students who are on the verge of proficiency, teacher recommendations] and this school offers the following other supports to students who are struggling in early literacy: [Describe other supports shared by the school leader]. Is this information accurate, and would you like to provide any other information about how this school supports students' development of early literacy skills?
6. Is there anything else you'd like to share with us about your experience as a Project On-Track site coordinator?

Analysis methods

This section describes the approach the study team used to conduct analyses for each research question and to analyze the qualitative data.

Analyses to address the research questions. For the first research question, on how schools are implementing Project On-Track, the study team calculated descriptive statistics for the Project On-Track program structure

variables: number of tutoring sessions, frequency of tutoring, and tutor qualifications. To explore the associations between implementation features, the study team calculated three contingency tables and performed chi-square tests to establish whether there were any significant associations between pairs of implementation structure variables (number of tutoring sessions by timing of tutoring, timing of tutoring by tutor qualifications, and number of tutoring sessions by tutor qualifications). Significant associations are presented in the main report, and full results are in appendix C.

Next, the study team calculated a series of contingency tables and performed chi-square tests to determine whether implementation varied by the rurality of participating schools. Significant associations are presented in the main report, and full results are in appendix C.

To address the second research question (describing the population of students served by Project On-Track), the study team calculated descriptive statistics for students' beginning-of-year reading skill level and grade level. For three other student characteristics—receipt of multilingual learner supports, receipt of special education services, and reported race/ethnicity—there was little variability in the sample (table A3). The study team decided to present results for analyses of these variables in appendix C rather than in the main report. Descriptive statistics for grade level and for beginning-of-year reading skill level are in the main report.

Table A3. Frequencies for receipt of multilingual learner supports, receipt of special education services, and reported race/ethnicity, 2022/23

Characteristic	Number	Percent
Receipt of multilingual learner supports[a]	42	4
Receipt of special education services[b]	155	15
Race/ethnicity		
White	917	89
Hispanic	60	6
Black	39	4
Other	20	2

Note: Percentages for race/ethnicity do not sum to 100 because of rounding.
a. Due to missing data, the total sample size for receipt of multilingual learner supports is 959.
b. Due to missing data, the total sample size for receipt of special education services is 1,005.
Source: Analysis of data provided by Project On-Track staff.

Next, the study team calculated contingency tables and performed chi-square tests to identify any significant associations between implementation structure variables and student characteristics. The findings for association between students' grade level and beginning-of-year reading skill level are in the main report, and full results for all student characteristics are in appendix C.

The third research question (how much progress students make in their literacy skills during a year of Project On-Track) had four subquestions: Did progress vary by student grade level or the rurality of participating schools? Did progress vary by the timing of tutoring (during school or outside of school hours)? Did progress vary by frequency of tutoring (two days a week or more often)? Did progress vary by tutor qualifications (teachers, administrators, or paraprofessionals compared with college students or others)? For all parts of this question, the study team limited the analyses to the group of students who scored in the high risk for reading difficulties category on the beginning-of-year DIBELS.

The study team addressed the overarching research question 3 with descriptive analyses of both the DIBELS composite scores and the DIBELS risk categories. Specifically, the study team subtracted the beginning-of-year

DIBELS score from the end-of-year DIBELS score to create a difference score. Next, the team calculated the mean and standard deviation for the difference score. They also calculated end-of-year frequencies for the risk categories (negligible risk, minimal risk, some risk, and at risk).

To address the subquestions associated with research question 3, the study team fit a series of multilevel models with students nested in schools. The dependent variable was the end-of-year DIBELS composite score. The study team began by estimating an unconditional model, with no predictors, to obtain an estimate of the intraclass correlation, which provides information about the proportion of variance that can be attributed to the school level. The results of this model were also used in combination with the results of later models to calculate pseudo R^2 statistics to quantify the proportion of variance explained by predictors in the models.

To address the first subquestion of research question 3 (whether progress varies by student grade level or the rurality of participating schools), the study team included students' beginning-of-year DIBELS composite scores, group-mean centered, as a predictor at level 1. The team included student characteristics (beginning-of-year reading skill level, grade level, reported race/ethnicity, receipt of multilingual learner supports, and receipt of special education services), also group-mean centered, as additional predictors at level 1 to examine whether the student end-of-year DIBELS composite score varied according to student characteristics. Level 2 included a variable indicating school size, prior school performance, and whether the school was rural.

To address the remaining subquestions of research question 3 (whether progress varies by the timing or frequency of tutoring or by tutor qualifications), the study team fit three multilevel models. Each model included a dichotomous variable representing one of the three implementation features as a predictor at level 2 (timing of tutoring, number of tutoring sessions, and tutor qualifications). These models also included grade level and beginning-of-year DIBELS score as student-level covariates and size and prior performance as school-level covariates at level 2.

Analyses of qualitative data. Two coders each reviewed all the interviews and independently applied concept codes (Miles et al., 2020) using the Comment function of Microsoft Word software. The coders then met to compare their codes and reach consensus on a set of final codes to apply to the interviews. After completing the coding, coders reviewed the codes to identify overarching themes across schools.

References

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Appendix B. Qualitative case studies

This appendix presents case studies describing implementation of Project On-Track at six schools, including factors that influenced school leaders' decisions to use particular implementation approaches, which approaches they used to select students for participation in Project On-Track, what other supports were available to reinforce students' literacy development, and what challenges and successes were encountered in implementing Project On-Track. The case studies are based on qualitative interviews with five school/district leaders and six Project On-Track site coordinators across six schools. The case studies provide additional context for the quantitative findings about how schools are implementing Project On-Track; they are not generalizable to Project On-Track implementation across the region. To preserve the anonymity of schools, school names are pseudonyms and school size is reported as a range.

Table B1. Characteristics of Project On-Track schools and their implementation approaches, 2022/23

Characteristic	School 1 Westview Elementary	School 2 Evergreen Elementary	School 3 Sandalwood Elementary	School 4 Whitewater Elementary	School 5 Golden Valley Elementary	School 6 Coral Springs Elementary
Rurality	Suburb	Rural	Rural	City	Town	City
School size	300-399	300-399	200-299	300-399	500-599	400-499
When first implemented	Summer 2021	Fall 2021	Fall 2022	Fall 2021	Summer 2021	Fall 2022
Timing of tutoring	During school	During school	During school	During school	After school	After school
Grades served	1-3	1-3	1-3	1-3	2 and 3	1-3
Frequency of tutoring (per week)	2 days	5 days	3 days	5 days	4 days	2 days
Duration of tutoring (minutes)	45	45	50-60	30-45	60	45
Tutor qualifications	Retired teachers, college students, para-professionals, others	Retired teachers, college students, para-professionals	Retired teachers, college students, paraprofessionals	Certified teachers	Certified teachers	Para-professionals

Note: To preserve the anonymity of schools, school names are pseudonyms and school size is reported as a range.
Source: Summary of data from qualitative interviews and National Center for Education Statistics (2021/22).

Cross-cutting themes

All six case study schools identified students to participate in Project On-Track tutoring based on data from universal screeners or benchmark assessments combined with teacher input, but schools used different cutoffs to determine which students would be eligible for tutoring. Some schools used Project On-Track tutoring as their Tier 2 support for students. Other schools offered Project On-Track tutoring to students who did not qualify for Tier 2 or Tier 3 supports but who demonstrated some need for additional literacy support, based on benchmark and screening assessment scores and teacher input. Schools that offered tutoring outside of the school day also considered students' ability to stay after school (for example, parent permission and transportation).

Several schools initially planned to implement Project On-Track after school to supplement instruction students received during the school day **but quickly changed their approach** after finding that afterschool tutoring entailed challenges related to student attendance and transportation and the hiring of high-quality tutors. Scheduling Project On-Track tutoring during the school day also proved difficult for many schools, however, and ultimately all four case study schools that offered Project On-Track tutoring during the school day leveraged their response to intervention (RTI) blocks to do so.

Interviewees' perspectives about the Project On-Track training varied. Some interviewees had heard that the trainings were overwhelming for tutors because of the amount of content covered, challenges with applying technology and using the Amplify Reading Platform, and tutors' lack of previous training in early literacy. Other interviewees, however, appreciated the comprehensiveness of the training and the ongoing support Project On-Track staff provided to tutors throughout the year.

Interviewees shared numerous examples of **positive impacts of Project On-Track, on both student confidence and student achievement.**

School 1: Westview Elementary

Westview Elementary School, located in a midsized suburb, enrolls between 300 and 399 students in kindergarten through grade 4. Westview offers Project On-Track tutoring to students in grades 1–3 during school. Tutoring sessions take place two days a week, for 45 minutes per session. Tutors at Westview include retired teachers, college students, paraprofessionals, and other retired professionals.

Implementation decisions. Leaders at Westview decided to offer tutoring two days a week to maximize the number of students who could participate in Project On-Track. One interviewee explained, "Once we tested [students], we found out that there was much more of a need [than we thought]. So, we decided to do it two days a week. [Students receive tutoring on] Monday/Wednesday or…Tuesday/Thursday. We just tried to get the best fit in scheduling that we could so that we could serve all the boys and girls that really needed [support]."

Principals in Westview's district had autonomy to decide when students would participate in Project On-Track tutoring, but the scheduling process was difficult and resulted in some students missing Tier 1 instructional time. In 2023/24 the principals are planning to be more consistent about using the RTI block for Project On-Track tutoring, which should be more efficient and easier to schedule.

Identification of students for Project On-Track. Leaders at Westview used screening assessments to identify students to participate in Project On-Track, but they struggled with using the assessments because of discrepancies between student scores on different assessments. Ultimately, school leaders decided to use Dynamic Indicators of Basic Early Literacy Skills (DIBELS) scores rather than benchmark assessments to identify students for tutoring because the DIBELS scores were generally lower and would be more aligned with the Amplify Reading program.

Initially, administrators offered Project On-Track tutoring to as many students as possible who were identified as at risk or some risk on the DIBELS and who qualified for Tier 2 or Tier 3 supports (students who scored below the 45th percentile) because they mistakenly believed that this was a requirement of the program. After learning that the program offers flexibility in who can be served, Westview now plans to focus on students who score between the 26th and 45th percentile on the DIBELS, because lower-performing students are eligible to receive other, more targeted, Tier 2 and Tier 3 services. The site coordinator shared, "Those kids [who score between the 26th and 45th percentile] fall through the cracks…. If you are at the bottom of Tier 1, we don't want you falling into Tier 2. So, focusing on them…and moving them forward is why we wanted to [serve those students]."

Implementation challenges and successes. Interviewees reported some challenges with tutor retention because strong tutors were hired as full-time employees in the district and their full-time positions prevented them from being able to continue tutoring during the school day. A district leader observed, "We've lost some amazing tutors because they were certified teachers and were given full-time teaching jobs. We didn't really like them stealing from us, but we were very happy for them that they got to go into an actual classroom." The site coordinator reported that she had trained a backup tutor to serve as a substitute in case a tutor was unable to attend a regularly scheduled tutoring session.

The site coordinator also noted that some tutors were overwhelmed by the initial Project On-Track trainings, which focused mainly on the process of enrolling new students in Amplify Reading rather than on tutoring practices. However, the enrollment process has since been streamlined, and the trainings have improved. Additionally, some tutors found that the Amplify Reading platform was not very user-friendly and was not well integrated with DIBELS. Nevertheless, the site coordinator encouraged, "[Amplify Reading and DIBELS] are not user-friendly programs, but they are amazing in the growth you see with kids.... You've got to dig in, but once you do, you're going to see results."

Generally, leaders at Westview are very pleased with the Project On-Track program and its impact on students. One interviewee noted, "[Project On-Track] has been so great for our boys and girls. We have seen such growth, not only just in the academic piece, but in the self-confidence piece as well.... [Students] were really struggling with reading and they were having such a hard time, and I think that was impacting self-confidence and other aspects of their school day. Now, when we go in and we talk with these boys and girls that have been in [Project On-Track],...they can't wait to go.... I think it's that attention that they are getting from those tutors and having that one-on-one time with them."

School 2: Evergreen Elementary

Evergreen Elementary School, located in a rural county, enrolls between 300 and 399 students in prekindergarten through grade 5. Evergreen offers Project On-Track tutoring to students in grades 1–3 during the school day. Tutoring sessions take place five days a week for 45 minutes per session. Tutors at Evergreen include retired teachers, paraprofessionals, and college students.

Implementation decisions. The school leader at Evergreen chose to implement Project On-Track during the school day because of concerns about transportation after school: "[Our district is] exceptionally rural. Transportation is a huge barrier to our kids. If we don't get them to and from [tutoring sessions], then we don't get them [to attend]. We made the decision that whatever we did [with Project On-Track], we would have to work it out during the school day."

The school leader decided to focus on students in grades 1–3 rather than students in kindergarten, because "[Kindergartners] don't really come into an intervention need until Christmas or later, and most of the time we can use our resources and intervene at that point and serve those kids well."

Initially, Project On-Track tutors pulled students from their arts classes to participate in tutoring, which was unpopular with students and difficult to schedule. In 2022/23, the school leader instead decided to offer tutoring as a Tier 3 support during the RTI period; however, Evergreen implements RTI at the same time for students in all grade levels, so finding enough tutors to serve all students who needed Tier 3 RTI support was an additional challenge.

Identification of students for Project On-Track. Evergreen identified the lowest-performing students (scoring in the 10th percentile or below on a universal screener) to participate in Project On-Track. Generally, students with

disabilities did not participate in Project On-Track at Evergreen because they were receiving other services during the RTI block. Program leaders also considered input from teachers about whether particular students might benefit from the program. A site coordinator explained: "The [screener] data, it's good data, except it's only a snapshot.... The teacher [input] is important because they see the students' performance in the classroom.... They have a lot more observation of that child, so they are better aware [of student needs]."

Students who did not participate in Project On-Track received other supplemental supports during the RTI block, including the Specialized Program Individualizing Reading Excellence reading program and the Core Knowledge Language Arts intervention toolkit.

Implementation challenges and successes. Originally, Evergreen and other schools in its district used teaching assistants as Project On-Track tutors, but principals often pulled the tutors for other administrative duties. To address this challenge, program leaders decided to hire tutors who would work exclusively for Project On-Track. One interviewee pointed out: "These tutors cannot be pulled to substitute.... The principals are told when we put tutors in their building, these are not your assistants.... They are protected. Their time is protected with these kids. That's a game-changer."

Evergreen faced challenges with tutor recruitment because of its rural location. One interviewee commented, "Niswonger had a list of potential tutors. Unfortunately, a lot of the people that put their name on that list, they were more interested in serving in [more urban] area[s], not so much in [our rural county]." To address this challenge, most of the tutors working at Evergreen were recruited based on existing relationships in the community. One site coordinator reported, "We personally contacted some retired teachers that we felt like would be good choices [as tutors]." Leveraging an existing relationship with a local university professor, one school leader described partnering to invite undergraduate students in the teacher preparation program to serve as tutors. The school leader shared, "That's beautiful because we are getting [the tutors] we need, but we are also watching these students work with our kids, and they are getting all that valuable training and experience.... It's a win-win for everybody."

One interviewee noted that initial Project On-Track trainings were large and overwhelming for some tutors and did not include enough opportunity to practice tutoring and behavior management skills. She also mentioned that tutors needed additional support to use some of the technology involved in Project On-Track and Amplify Reading.

Overall, leaders at Evergreen expressed appreciation for the financial support that allowed them to maintain a low tutor–student ratio during tutoring. One site coordinator noted, "Niswonger is key for us, because they fund this program, and that's a really big deal. I'm not sure our district could [fund it].... It would have to be done through the regular RTI program, and the groups would be bigger. I feel like that high dosage is definitely the key to the success." The school leader echoed this sentiment, "I cannot say enough about how grateful we are for all of that support.... I [wish we could] implement this schoolwide, districtwide—we just can't, it's cost-prohibitive."

School 3: Sandalwood Elementary

Sandalwood Elementary School, located in a rural county, enrolls between 200 and 299 students in kindergarten through grade 8. Sandalwood offers Project On-Track tutoring to students in grades 1–3 during the school day. Tutoring sessions take place three days a week for 50–60 minutes a session. Tutors at Sandalwood include retired teachers, paraprofessionals, and college students.

Implementation decisions. Leaders at Sandalwood initially planned to implement Project On-Track tutoring after school because they wanted tutoring to supplement instruction that students received during school. They quickly realized, however, that it would be easier for students to participate in tutoring during the school day. The site coordinator shared, "We found that we weren't reaching as many students [after school].... We've got them here at school already, so that was the biggest reason we shifted [to offering tutoring during school]." She noted that offering tutoring during students' RTI block was the easiest to schedule.

Sandalwood started implementing tutoring two days a week but expanded to three days a week so that students would get sufficient tutoring even if they were absent one day. The school leader explained, "We started off with two [days a week], and I just felt like if a kid is absent one day, that's just one day a week [that they receive tutoring], and it's not going to be effective that way."

Identification of students for Project On-Track. Leaders at Sandalwood used a universal screener and teacher recommendations to identify struggling readers for Project On-Track who were not eligible for other Tier 2 or Tier 3 services (students who scored between the 26th and 40th percentile). The school leader described these students as "bubble kids that kind of fall through the cracks.... It's not that they have any academic disabilities, it's that they just had some loss of learning gaps over the years, and they are the ones that need that tutoring." The site coordinator added, "We are trying to catch the students that fall between the cracks, who are having a hard time in their regular grade level, but not quite ready to be put in a Tier 2 [support]." If students did not make progress in Project On-Track after one semester, they started receiving Tier 2 supports from a certified teacher instead.

In addition to Tier 2 and Tier 3 supports, some students received additional tutoring focused on reading comprehension.

Implementation challenges and successes. Initially, leaders at Sandalwood worried about recruiting enough high-quality tutors for Project On-Track. To address this challenge, they encouraged instructional assistants to serve as tutors. The school leader explained, "We knew it was going to be hard to hire tutors to come in just so many days a week, especially those that we felt confident were going to be effective. [A Project On-Track program leader] said, 'We can start with instructional assistants.... Why not encourage them and support them in doing this?'" The school leader also suggested that using instructional assistants as tutors could be part of a "grow your own" teacher program.

The school leader at Sandalwood also cited challenges with the timing of the Project On-Track training, particularly if tutors were hired after the school year began. She shared, "With [a different tutoring program], a lot of the modules and trainings we did ourselves, and we could get it done quicker.... With the Project On-Track training, it had to come from their trained people, so the timeframe became a little difficult after we had already started the program."

Nonetheless, interviewees at Sandalwood valued the comprehensive tutor training, which covered tutoring basics and the Amplify Reading platform, as well as the ongoing support for tutors. The site coordinator noted, "I feel like the support [for tutors] is there. [The training] is a lot if you don't know anything about reading, but it's not to say that it's not doable." The site coordinator also shared that one of the more experienced tutors at Sandalwood served as a "tutor on-call." The site coordinator explained, "[The tutor on-call] has just become fantastic working the program and knowing the ins and outs. Once a week on Mondays, she has what we call office hours. If any of the tutors have any questions or need some support, she is available to support them."

School 4: Whitewater Elementary

Whitewater Elementary School, located in a small city, enrolls between 300 and 399 students in prekindergarten through grade 5. Whitewater offers Project On-Track tutoring to students in grades 1–3 during the school day. Tutoring sessions take place five days a week for 30–45 minutes per session. Tutors at Whitewater are certified teachers.

Implementation decisions. Initially, leaders at Whitewater wanted to offer Project On-Track tutoring after school, but certified teachers were unwilling to work longer hours, and part-time teaching assistants were already working the maximum permitted number of hours a week. Furthermore, the school leader was concerned about the school's ability to hire additional noncertified staff to serve as tutors, considering that the district had struggled to fill other noncertified positions.

Instead, Whitewater hired full-time certified teachers who spent part of their day as Project On-Track tutors and part of the day providing additional support to the students they tutor. The school leader explained, "When [tutors] don't have students in front of them, then they are pushing into the classroom teacher's class…to support and then to also get an idea of what [students] are doing in there, which then helps them when they come out to assist those students [during tutoring]." The site coordinator added, "That has been probably the biggest win for us, having full-time staff who are here every day, who can push into the classrooms…. They can see what the teachers are teaching and how they are teaching, and then bring that into their tutoring." Interviewees noted that the full-time certified teachers working as tutors also may require less training because they are starting with some skills and experience with literacy instruction.

Identification of students for Project On-Track. Whitewater Elementary generally offers Project On-Track tutoring to students who score between the 25th and 40th percentile on a universal screener; however, they consider teacher input as well. One interviewee explained, "We've discovered you can't always go by those ranges…. That's kind of like just a suggestion, but we've got students that fall above the 40th…[and] students in tutoring that fall below the 25th that we feel like tutoring is [a] better fit." She added, "It's not always so black and white when you get in there and you start looking at additional data sources and teacher feedback." Struggling students who do not participate in Project On-Track receive other RTI supports during their intervention block.

Implementation challenges and successes. The school leader noted that the Amplify Reading program did not align exactly with Whitewater's regular English language arts curriculum, which created some challenges. She explained, "The tutor introduce[s] something, for example, a sound pattern that's not been introduced in [the core curriculum]…and it's just confusing. They are not aligned and working together. And then that causes also some issues between the teacher and the tutor, because the teacher didn't know or doesn't know the [Amplify Reading] program, for example, and how things are rolled out." To address this challenge, Whitewater planned to refine its curriculum maps and identify more opportunities for tutors and teachers to collaborate. Hiring full-time certified teachers as tutors helped to address this challenge as well.

School 5: Golden Valley Elementary

Golden Valley Elementary School, located in a distant town, enrolls between 500 and 599 students in prekindergarten through grade 8. Golden Valley offers Project On-Track tutoring to students in grades 2 and 3 after school. Tutoring sessions take place four days a week for 60 minutes a session. Tutors at Golden Valley are certified teachers.

Implementation decisions. The school leader at Golden Valley wanted to offer Project On-Track tutoring after school because the school offered many other services during the RTI block, and no extra rooms were available for tutoring during the school day.

The tutoring program at Golden Valley exceeded Project On-Track's minimum requirements for frequency and duration because, the school leader explained, "We [school staff] figured more [tutoring] is better. We know we only had to do it two days a week, but if we can get kids to do it and teachers to show up, I'm all for doing it [more frequently]. Our kids are so needy. So, the more [tutoring] that they can get, the better off they are going to be."

The school leader at Golden Valley decided to offer tutoring to students in grades 2 and 3 because of new legislation in Tennessee that requires retaining students in grade 3 if they are not proficient in English language arts by the end of the school year. The school leader asked the teachers in grades 2 and 3 if they would be interested in serving as tutors, and they were: "We looked at the teachers who were wanting to [tutor] and I said, 'It's going to be best for you building relationships with these students if you serve the kids that you teach.'"

Identification of students for Project On-Track. To participate in Project On-Track, leaders at Golden Valley identified students who needed but were not receiving additional support in reading during the school day and who were able to stay after school. Most students at Golden Valley received additional Tier 2 and Tier 3 supports during the school day, but some students who struggled with reading did not receive these additional supports because of limited staff capacity. Those students were prioritized to receive Project On-Track tutoring after school. Some students also received additional tutoring after school through another state-funded tutoring program.

Implementation challenges and successes. A few students at Golden Valley had attendance issues during Project On-Track. However, the site coordinator noted that because the program was offered four days a week, even students with chronic absenteeism often still participated in tutoring for at least two days a week. To encourage attendance, Golden Valley provided food and transportation after tutoring. The site coordinator also mentioned that strong tutor–student relationships were important in promoting attendance: "That relationship with the teacher and with the student and with the parent, knowing that [the tutor] really is there and has the best interest of the kid in mind, [is really important]…. It's not like [students] are having to spend more time with the teacher [they] hate after school; [students] are getting to spend more time with the teacher that [they] love and enjoy. Our folks that are working after school have really caring and loving personalities, and I think that plays a role too, in just wanting those kids to come."

The site coordinator at Golden Valley appreciated the structure and organization of Project On-Track, which she uses as a model for other tutoring programs in the district. "Being a [Project On-Track] site coordinator…helped me see what a good tutoring model looked like so that I could help form our district's tutoring model as well." She added, "When Project On-Track has done something, it has helped me to get a plan together in the district and saying, 'I need to establish a similar timeline.' Really, truly, it has helped me a lot because they have done a lot of the work, and I turned around and just did the same thing here in [our] county."

She also valued the high-quality training that Project On-Track tutors received and how those tutors shared their knowledge with other school staff. She described how Project On-Track "provides [tutors] the professional development that is at a much better quality than I have the capacity to do at the district level…. We were not able to train our [other] tutors as extensively as the Project On-Track tutors were trained, but [the Project On-Track tutors] gave us a touchpoint within each school, someone who is considered like an expert." The site coordinator also appreciated the Niswonger Foundation's ongoing communication and support for tutors and

site coordinators: "They've done lots of training. They are always there, if we need them. We email them and they respond really quickly, if I have a question. It's been great on my end."

School 6: Coral Springs Elementary

Coral Springs Elementary School, located in a small city, enrolls between 400 and 499 students in prekindergarten through grade 4. Coral Springs offers Project On-Track tutoring to students in grades 1–3 after school. Tutoring sessions take place two days a week for 45 minutes per session. The tutor at Coral Springs is a paraprofessional.

Implementation decisions. The site coordinator for Coral Springs reported that Project On-Track was implemented after school because of a perceived misalignment between the Project On-Track Amplify Reading program and the RTI curriculum being used during the school day. She noted, "Our response to intervention program doesn't use the Amplify [Reading] curriculum, and I think that was one of the main reasons that we're doing [Project On-Track] after school."

Identification of students for Project On-Track. Leaders at Coral Springs considered several factors when identifying students to participate in Project On-Track tutoring: a variety of literacy benchmark assessment and screener scores to identify students who were reading below grade level, teacher input and recommendations, and parents' ability to pick up students after school. The school also selected students who were expected to progress through the program quickly.

In addition to Project On-Track, some students received additional Tier 2 literacy support during an RTI period during the school day. Coral Springs also offered another afterschool program that provided less-structured tutoring.

Implementation challenges and successes. The site coordinator indicated that attendance was the biggest challenge at Coral Springs: "Even though the majority of our [tutored] students are [already] in afterschool programs and their parents know that they are coming to tutoring…sometimes [parents] will pick [students] up early…. [Parents are] not consistent about letting the student stay for tutoring." To address this challenge, the school contacted parents when a student missed more than one session; it may consider offering attendance incentives in the future.

Overall, the Coral Springs site coordinator appreciated the support available to Project On-Track tutors, specifically an optional weekly Zoom call for tutors who have questions or need additional support. She reported, "[The tutor said], '[The weekly calls] need to be mandatory because it's so helpful…. Even if I don't have a question, I get on [the call] and every week I learn something.'"

The site coordinator also noted that students enjoyed the Amplify Reading curriculum, and teachers saw significant improvements in their reading skills: "Teachers that have kids that are in Project On-Track have said [those students]…have really come a long way and we can totally tell that they are applying what they are learning, they are reading more…. Our tutor just sings the praises of the [Project On-Track] program. It's been really great for our students."

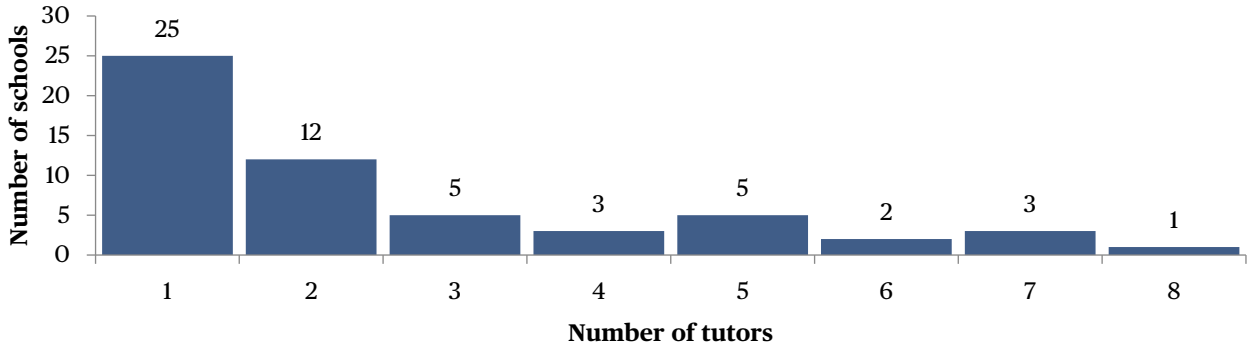
Appendix C. Supporting analyses

This appendix presents additional analyses of how schools implemented Project On-Track, additional analyses of the characteristics of students who participated in a full year of Project On-Track, complete results of analyses of the extent to which progress varied by student and school characteristics, analyses to test for baseline equivalence, and complete results for the models examining the association between implementation features and student end-of-year scores on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS).

Additional analyses of how schools implemented Project On-Track

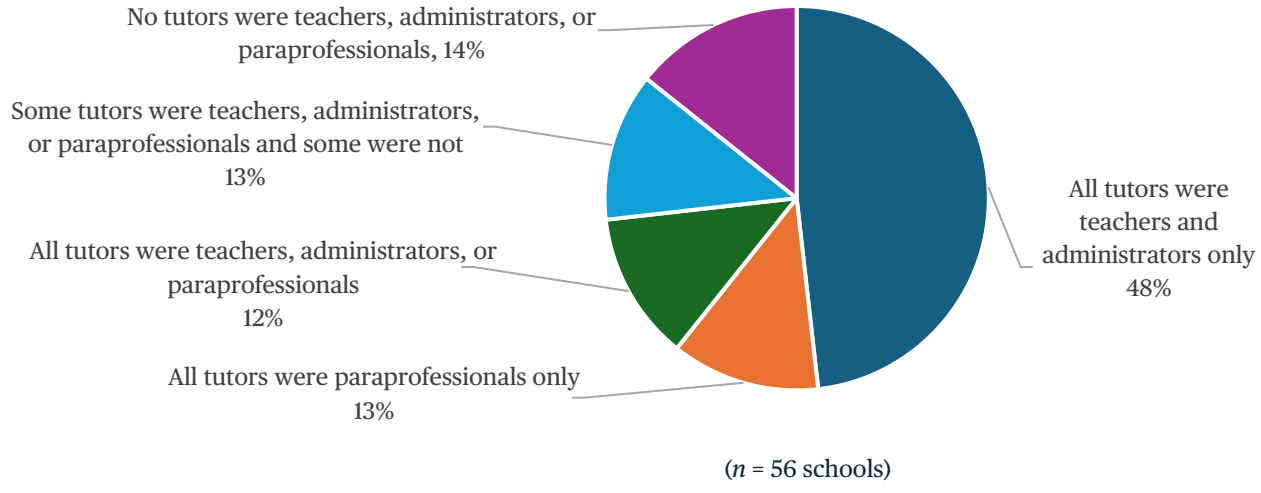
Distribution of tutors by school. Schools varied in the number of tutors they hired to deliver tutoring with the specified ratio of one tutor to three students. A majority of schools employed only one or two Project On-Track tutors (figure C1). Nearly half (48 percent) of schools used only teachers and administrators as tutors (figure C2). A smaller proportion used only paraprofessionals as tutors (13 percent) or used a mix of teachers, administrators, and paraprofessionals (12 percent) as tutors. Slightly over a quarter of schools employed at least one tutor that was not a teacher, administrator, or paraprofessional.

Figure C1. Number of Project On-Track tutors per school, 2022/23



Source: Analysis of data provided by Project On-Track staff.

Figure C2. Certification of Project On-Track tutors by school, 2022/23



Note: The teacher category includes retired teachers.
Source: Analysis of data provided by Project On-Track staff.

Nonsignificant associations. This section presents complete results for nonsignificant associations between pairs of Project On-Track tutoring implementation features, as well as nonsignificant associations between tutoring features and rurality. The association between frequency of tutoring and tutor qualifications was not significant (table C1). Neither frequency of tutoring (table C2) nor tutor qualifications (table C3) was significantly associated with school rurality.

Table C1. Frequency of Project On-Track tutoring by teacher certification, 2022/23

Frequency of tutoring	All tutors were teachers, administrators, or paraprofessionals	Not all tutors were teachers, administrators, or paraprofessionals
Twice a week	39	27
More than twice a week	61	73

Note: $\chi^2(1) = 0.73$, $p = .39$.
Source: Analysis of data provided by Project On-Track staff.

Table C2. Frequency of Project On-Track tutoring by rurality, 2022/23

Frequency of tutoring	Rural	Nonrural
Twice a week	25	44
More than twice a week	75	56

Note: $\chi^2(1) = 1.36$, $p = .24$.
Source: Analysis of data provided by Project On-Track staff.

Table C3. Project On-Track tutor qualifications by rurality, 2022/23

Tutor qualifications	Rural	Nonrural
All tutors were teachers, administrators, or paraprofessionals	71	75
Not all tutors were teachers, administrators, or paraprofessionals	29	25

Note: $\chi^2(1) = 0.12$, $p = .73$.
Source: Analysis of data provided by Project On-Track staff.

Additional analyses of the characteristics of the students who participated in Project On-Track

This section presents the results of two groups of analyses: those for students receiving special education services for which there was little variability in the sample, and complete results for the nonsignificant association between student beginning-of-year DIBELS and frequency of tutoring (two days a week as compared with more than two days a week).

The study team did not analyze implementation features by other student characteristics (receipt of multilingual learner supports and race/ethnicity) because of limitations in the sample. Only 11 percent of the sample identified as a race other than White and 4 percent received multilingual learner supports. Moreover, these students were concentrated in relatively few schools in the sample, so any statistically significant differences related to these characteristics could be the result of characteristics of or implementation decisions made by a relatively small set of Project On-Track schools. Only 12 schools enrolled any students receiving multilingual learner supports in Project On-Track for a full year, and those were disproportionately not rural (11 percent of schools that enrolled multilingual learner students in Project On-Track for a full year were rural compared with 60 percent of schools that did not enroll any multilingual learner students in Project On-Track). As a result, implementation decisions that are related to the rurality of schools could appear to be associated with multilingual learner students.

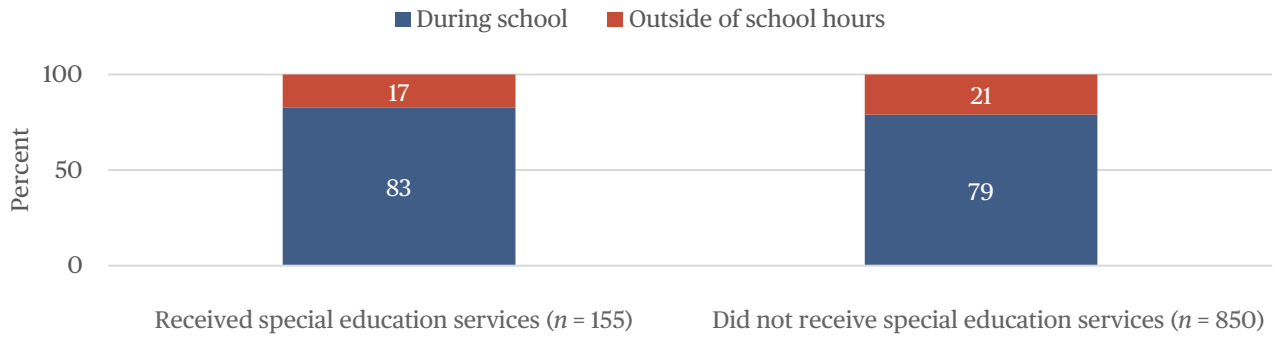
Similarly, only in 9 schools did students whose race/ethnicity was other than White constitute at least 50 percent of students enrolled in Project On-Track for a full year. These schools tended to be larger in terms of enrollment and less rural. (Among schools that enrolled at least 50 percent of students whose race/ethnicity was other than White in Project On-Track for a full year, 38 percent were rural. In contrast, among schools that that enrolled less than 50 percent of students whose race/ethnicity was other than White in Project On-Track for a full year, 50 percent were rural.) For these reasons, the study team did not further analyze implementation features by receipt of multilingual learner services or race/ethnicity.

Analyses for students receiving special education services

Although only 15 percent of the student sample received special education services, these students were more evenly distributed across schools. Findings related to implementation features are reported by receipt of special education services below, but given the relatively small sample size (n = 155), these results should be interpreted with caution.

The relationship between timing of tutoring and receipt of special education services was not significant (figure C3).

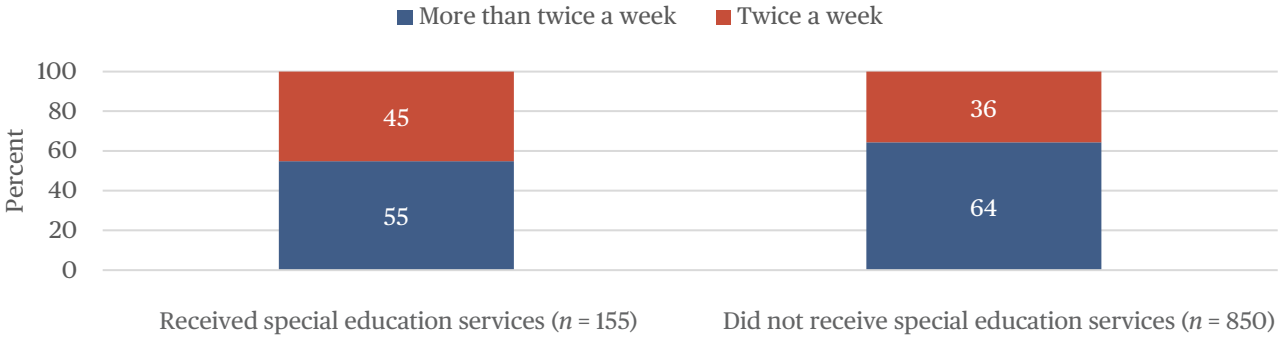
Figure C3. Timing of Project On-Track tutoring by receipt of special education services, 2022/23



Note: $\chi^2(1) = 0.85$, $p = 0.36$.
Source: Analysis of data provided by Project On-Track staff.

Students who received special education services were less likely than students who did not receive these services to have access to tutoring more than twice a week. About 55 percent of students who received special education services had access to tutoring more than twice a week compared with more than 64 percent of students who did not receive these services (figure C4).

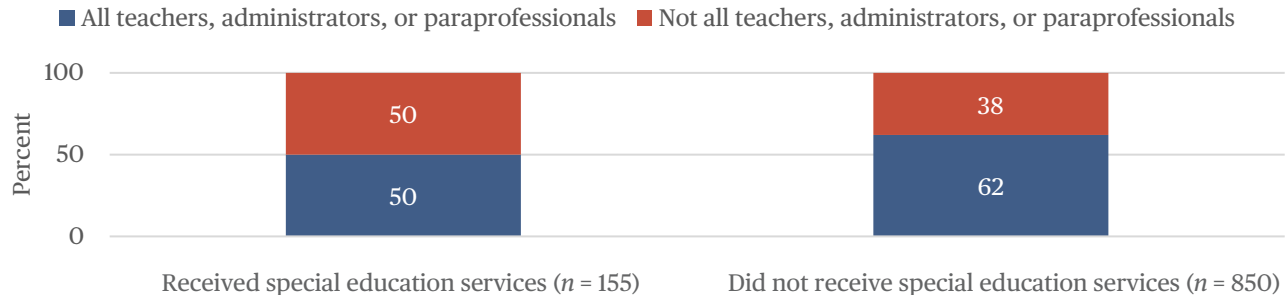
Figure C4. Frequency of Project On-Track tutoring by receipt of special education services, 2022/23



Note: $\chi2(1) = 5.08$, $p = .02$.
Source: Analysis of data provided by Project On-Track staff.

Students who received special education services were less likely than students who did not receive these services to be at schools where all tutors were teachers, administrators, or paraprofessionals. About half of students who received special education services were at schools where all tutors were teachers, administrators, or paraprofessionals compared with 62 percent of students who did not receive these services (figure C5).

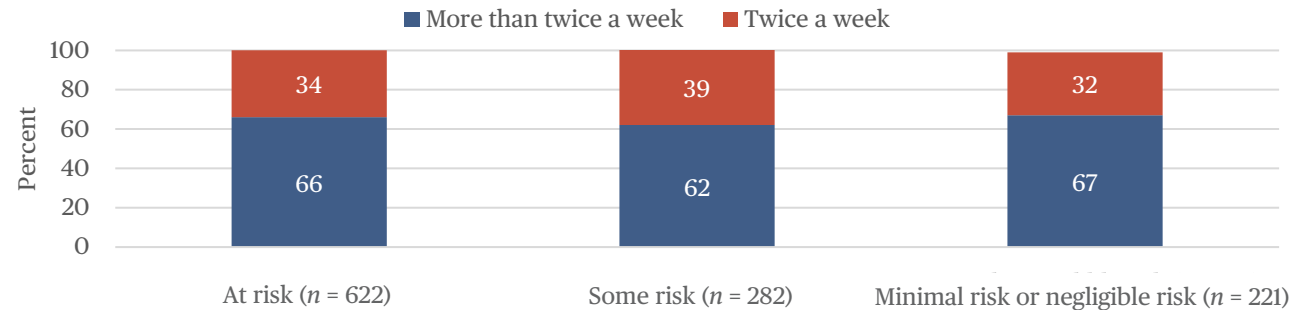
Figure C5. Project On-Track tutor qualifications by receipt of special education services, 2022/23



Note: $\chi 2(1) = 7.78$, $p < .01$
Source: Analysis of data provided by Project On-Track staff.

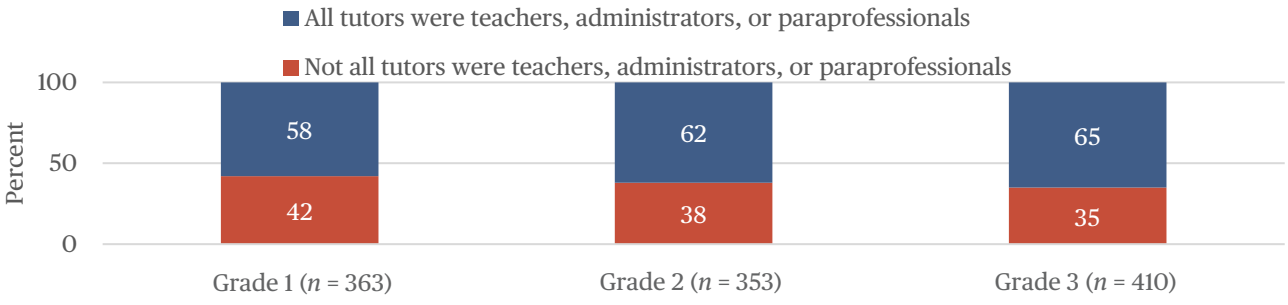
Complete results for the nonsignificant associations between student beginning-of-year DIBELS category and frequency of tutoring and between grade level and tutor qualifications. The relationship between frequency of tutoring and beginning-of-year DIBELS category (at risk, some risk, and minimal risk or negligible risk of reading difficulties), was not significant (figure C6). The relationship between tutor qualifications and grade level was not significant (figure C7).

Figure C6. Frequency of Project On-Track tutoring by beginning-of-year Dynamic Indicators of Basic Early Literacy Skills category, 2022/23



Note: $\chi 2(2) = 2.33$, $p = .31$.
Source: Analysis of data provided by Project On-Track staff. Percentages may not sum to 100 because of rounding.

Figure C7. Project On-Track tutor qualifications by grade level, 2022/23



Note: $\chi 2(2) = 4.42$, $p = .11$.
Source: Analysis of data provided by Project On-Track staff.

Analyses of the extent to which students made progress over time

At both the beginning and end of the school year, students who received tutoring through Project On-Track were generally considered at higher risk for reading difficulties based on the DIBELS categories (table C4).

Table C4. Percentage of Project On-Track students scoring in each category on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment at the beginning and end of the school year

DIBELS risk category	Beginning of year	End of year
At risk	55	43
Some risk	25	25
Minimal risk	18	25
Negligible risk	2	7

Note: The publishers of DIBELS provide cutpoints for the composite scores that define four categories of risk for reading difficulties.
Source: Analysis of data provided by Project On-Track staff.

The study team fit a multilevel model to examine the extent to which student progress varied by student characteristics or the rurality of participating schools (table C5). Results indicate that, after the model controlled for other student and school characteristics, only students' beginning-of-year DIBELS score is significantly associated with end-of-year DIBELS scores. After all other variables in the model were controlled for, students with higher beginning-of-year DIBELS scores tended to have higher end-of-year DIBELS scores than students with lower beginning-of-year DIBELS scores.

Table C5. Complete results for the hierarchical linear model examining the association of Project On-Track school and student characteristics with students' end-of-year Dynamic Indicators of Basic Early Literacy Skills (DIBELS) scores, 2022/23

Fixed effect	Coefficient	Standard error	*p*-value
Intercept	419.73	1.43	<.01
School-level variable			
School size (enrollment)	0.01	0.01	.34
Rurality[a]	3.95	3.20	.22
Prior school performance	0.04	0.15	.78
Student-level variable			
Beginning-of-year DIBELS score	1.19	0.15	<.01
Grade	3.42	1.94	.08
Receipt of special education services	-3.30	2.84	.25
Receipt of multilingual learner supports	3.38	8.72	.70
Race/ethnicity[b]	-0.83	4.89	.87

Note: The sample included 622 students in 54 schools. Coefficients are from a two-level multiple regression model that accounted for the nesting of students within schools. Student-level variables were centered on the school mean. School-level variables were centered on the sample mean. Compared with an unconditional model with no predictors, this model reduced the unexplained variance in end-of-year DIBELS scores by 19 percent.
a. Rurality is a dichotomous variable coded 0 = nonrural and 1 = rural.
b. Race/ethnicity is a dichotomous variable coded 0 = race or ethnicity other than White and 1 = White.
Source: Analysis of data provided by Project On-Track staff.

Baseline equivalence

Prior to examining whether implementation characteristics were associated with student progress in literacy, the study team examined whether students exposed to different implementation features had similar literacy scores at the start of the school year, called baseline equivalence. The study team conducted separate analyses for each implementation characteristic.

The analysis of baseline equivalence for the frequency of tutoring found that, after school and student characteristics were controlled for, the beginning-of-year DIBELS scores did not differ significantly between the group with access to tutoring more than two times a week and the group with access to tutoring two times a week (Hedges' g = 0.20; table C6).

Table C6. Complete results for the hierarchical linear model examining baseline equivalence by frequency of Project On-Track tutoring, 2022/23

Fixed effect	Coefficient	Standard error	*p*-value
Intercept	304.85	0.66	<.01
School-level variable			
Frequency of tutoring[a]	2.10	1.40	.14
School size (enrollment)	0.01	0.01	.07
Rurality[b]	4.50	1.57	<.01
Prior school performance	0.15	0.07	.03
Student-level variable			
Grade	-8.77	0.41	<.01

Note: The sample included 622 students in 54 schools. Coefficients are from a two-level multiple regression model that accounted for the nesting of students within schools. Student-level variables were centered on the school mean. School-level variables were centered on the sample mean. Compared with an unconditional model with no predictors, this model reduced the unexplained variance in beginning-of-year Dynamic Indicators of Basic Early Literacy Skills scores by 7 percent. Hedges' g = 0.20.

a. Frequency of tutoring is a dichotomous variable that is coded 0 = two times a week and 1 = more than two times a week.

b. Rurality is a dichotomous variable coded 0 = nonrural and 1 = rural.

Source: Analysis of data provided by Project On-Track staff.

The analysis of baseline equivalence by timing of tutoring found that, after school and student characteristics were controlled for, the beginning-of-year DIBELS scores did not differ significantly between the group with access to tutoring during the school day and the group with access to tutoring outside of school hours (Hedges' g = 0.29; table C7).

Table C7. Complete results for the hierarchical linear model examining baseline equivalence by timing of Project On-Track tutoring, 2022/23

Fixed effect	Coefficient	Standard error	*p*-value
Intercept	304.84	0.67	<.01
School-level variable			
School size (enrollment)	0.01	0.01	.04
Rurality[a]	4.75	1.57	<.01
Prior school performance	0.14	0.07	.04
Student-level variable			
Timing of tutoring[b]	2.94	2.70	.28
Grade	-8.74	0.41	<.01

Note: The sample included 622 students in 54 schools. Coefficients are from a two-level multiple regression model that accounted for the nesting of students within schools. Student-level variables were centered on the school mean. School-level variables were centered on the sample mean. Compared with an unconditional model with no predictors, this model reduced the unexplained variance in beginning-of-year Dynamic Indicators of Basic Early Literacy Skills scores by 7 percent. Hedges' g = 0.29

a. Rurality is a dichotomous variable coded 0 = nonrural and 1 = rural.

b. Timing of tutoring is a dichotomous variable coded 0 = during the school day and 1 = outside of school hours.

Source: Analysis of data provided by Project On-Track staff.

Finally, the analysis of baseline equivalence by tutor qualifications found that, after school and student characteristics were controlled for, the beginning-of-year DIBELS scores did not differ significantly for students who had access to tutoring in schools where all tutors were teachers, administrators, or paraprofessionals and for students who had access to tutoring in schools where not all tutors were teachers, administrators, or paraprofessionals (Hedges' g = 0.07; table C8).

Table C8. Complete results for the hierarchical linear model examining baseline equivalence by Project On-Track tutor qualifications, 2022/23

Fixed effect	Coefficient	Standard error	*p*-value
Intercept	304.89	0.68	<.01
School-level variable			
Tutor qualifications[a]	0.74	1.49	.62
School size (enrollment)	0.01	0.01	.05
Rurality[b]	4.69	1.59	<.01
Prior school performance	0.13	0.07	.07
Student-level variable			
Grade	-8.77	0.41	<.01

Note: The sample included 622 students in 54 schools. Coefficients are from a two-level multiple regression model that accounted for the nesting of students within schools. Student-level variables were centered on the school mean. School-level variables were centered on the sample mean. Compared with an unconditional model with no predictors, this model reduced the unexplained variance in beginning-of-year Dynamic Indicators of Basic Early Literacy Skills scores by 7 percent. Hedges' g = 0.07

a. Tutor qualifications is a dichotomous variable that is coded 0 = not all tutors are teachers, administrators, or paraprofessionals and 1 = all tutors are teachers, administrators, or paraprofessionals.

b. Rurality is a dichotomous variable coded 0 = nonrural and 1 = rural.

Source: Analysis of data provided by Project On-Track staff.

Complete results for models examining the association between implementation features and student literacy scores

This section presents complete results for the models examining the association between implementation features and student literacy scores. Results for the analysis of the association between frequency of tutoring and students' end-of-year DIBELS scores are in table C9 (Hedges' g = 0.23). Results for the analysis of the association between timing of tutoring and students' end-of-year DIBELS scores are in table C10 (Hedges' g = 0.03). Results for the analysis of tutor qualifications and students' end-of-year DIBELS scores are in table C11 (Hedges' g = -0.07).

Table C9. Complete results for the hierarchical linear model examining the association between frequency of Project On-Track tutoring and students' end-of-year Dynamic Indicators of Basic Early Literacy Skills (DIBELS) scores, 2022/23

Fixed effect	Coefficient	Standard error	*p*-value
Intercept	420.22	1.50	<.01
School-level variable			
Frequency of tutoring[a]	5.89	3.14	.07
School size (enrollment)	0.00	0.01	.51
Rurality[b]	2.77	3.45	.43
Prior school performance	0.18	0.15	.25
Student-level variable			
Beginning-of-year DIBELS score	1.14	0.13	<.01
Grade	3.33	1.75	.06

Note: The sample included 622 students in 54 schools. Coefficients are from a two-level multiple regression model that accounted for the nesting of students within schools. Student-level variables were centered on the school mean. School-level variables were centered on the sample mean. Compared with an unconditional model with no predictors, this model reduced the unexplained variance in end-of-year DIBELS scores by 2 percent. Hedges' $g = 0.23$.

a. Frequency of tutoring is a dichotomous variable that is coded 0 = two times a week and 1 = more than two times a week.

b. Rurality is a dichotomous variable coded 0 = nonrural and 1 = rural.

Source: Analysis of data provided by Project On-Track staff.

Table C10. Complete results for the hierarchical linear model examining the association between timing of Project On-Track tutoring and students' end-of-year Dynamic Indicators of Basic Early Literacy Skills (DIBELS) scores, 2022/23

Fixed effect	Coefficient	Standard error	*p*-value
Intercept	420.23	1.55	<.01
School-level variable			
Timing of tutoring[a]	7.82	9.15	.36
School size (enrollment)	0.01	0.01	.37
Rurality[b]	3.04	3.57	.40
Prior school performance	0.15	0.16	.35
Student-level variable			
Beginning-of-year DIBELS score	1.13	0.13	<.01
Grade	3.36	1.75	.06

Note: The sample included 622 students in 54 schools. Coefficients are from a two-level multiple regression model that accounted for the nesting of students within schools. Student-level variables were centered on the school mean. School-level variables were centered on the sample mean. Compared with an unconditional model with no predictors, this model reduced the unexplained variance in end-of-year DIBELS scores by 2 percent. Hedges' $g = 0.03$.

a. Timing of tutoring is a dichotomous variable coded 0 = during the school day and 1 = outside of school hours.

b. Rurality is a dichotomous variable coded 0 = nonrural and 1 = rural.

Source: Analysis of data provided by Project On-Track staff.

Table C11. Complete results for the hierarchical linear model examining the association between Project On-Track tutor qualifications and students' end-of-year Dynamic Indicators of Basic Early Literacy Skills (DIBELS) scores, 2022/23

Fixed effect	Coefficient	Standard error	*p*-value
Intercept	420.31	1.61	<.01
School-level variable			
Tutor qualifications[a]	0.82	3.43	.81
School size (enrollment)	0.01	0.01	.39
Rurality[b]	2.70	3.67	.42
Prior school performance	0.13	0.17	.44
Student-level variable			
Beginning-of-year DIBELS score	1.14	0.13	<.01
Grade	3.33	1.91	.06

Note: The sample included 622 students in 54 schools. Coefficients are from a two-level multiple regression model that accounted for the nesting of students within schools. Student-level variables were centered on the school mean. School-level variables were centered on the sample mean. Compared with an unconditional model with no predictors, this model reduced the unexplained variance in end-of-year DIBELS scores by 2 percent. Hedges' g = -0.07.

a. Tutor qualifications is a dichotomous variable that is coded 0 = not all tutors are teachers, administrators, or paraprofessionals and 1 = all tutors are teachers, administrators, or paraprofessionals.

b. Rurality is a dichotomous variable coded 0 = nonrural and 1 = rural.

Source: Analysis of data provided by Project On-Track staff.