

Research Results

Fountas & Pinnell Classroom K–3 QED Study

Study Profile

District:

273 Kentucky Elementary Schools

Evaluation Period:

2022–2023 school year

Sample:

- 3,956 K–3 Students
(1,319 Treatment & 2,637 Comparison)
- 42 Treatment Teachers, 6 Administrators

Study Conducted by:

RMC Research Corporation

Study Design:

ESSA Tier 3 Promising Evidence

Outcome Measures:

- NWEA MAP Growth Reading Assessment
- Teacher Survey, Teacher Focus Groups, Administrator Interviews

The Study

RMC Research Corporation (RMC) partnered with Heinemann to conduct a study to document the implementation and outcomes associated with the contexts of *Fountas & Pinnell Classroom*™ (FPC) in one medium-sized school district in Kentucky during the 2022–2023 school year. The mixed-methods study was designed to provide descriptive information regarding professional development, such as training, coaching, and workshops, that was provided to teachers to support their implementation of the various FPC contexts and their perceptions of the quality of FPC for students in Grades K–3. The study was also designed to provide descriptive and correlational evidence of the influence of FPC on teacher and student outcomes. Data about FPC implementation during 2022–2023 were collected from K–3 teachers and administrators in the school

district in spring 2024. RMC administered a teacher survey and conducted virtual teacher focus groups and school administrator interviews. RMC also collected student demographic and reading achievement data for all Grade K–3 students in the district and across the state in districts not implementing FPC.

Key findings from the study revealed the following:

1. Participation in FPC had a statistically significant and positive impact on NWEA® MAP® Growth™ Reading scores for students in Grades K–3.
2. Most teachers and administrators agreed that FPC positively influenced student outcomes.

3. Teachers and administrators reported that FPC implementation contributed to improved teacher instructional practices.
4. The implementation of FPC contexts varied and teachers used Interactive Read-Aloud most frequently.
5. Most teachers reported positive experiences with professional development provided by FPC.

Fountas & Pinnell Classroom

The *Fountas & Pinnell Classroom System* (FPC) is a cohesive, multi-text approach to teaching literacy for students in Pre–K through Grade 6 and is designed to maximize student learning with systematic lessons and student books and materials, as well as by supporting teachers' ability to provide high-impact literacy instruction. FPC is designed to serve the needs of each student through the following seven instructional contexts: Interactive Read-Aloud, Shared Reading, Guided Reading, Independent Reading, Book Clubs, Reading and Writing Minilessons, and Phonics, Spelling, and Word Study. The contexts of FPC can be used as stand-alone literacy resources or in conjunction with an existing literacy curriculum.

FPC was introduced to teachers in the school district in the 2020–2021 academic year. District teachers implemented FPC primarily in Kindergarten through Grade 3 classrooms, using whole- and small-group instruction and independent learning approaches across the FPC instructional contexts.

Study Design

To examine the implementation and outcomes of FPC, RMC conducted a mixed-methods quasi-experimental design (QED) study focused on K–3 teachers and students in the school district. The study was designed to determine the extent to which teachers used the various FPC contexts and whether the use of FPC contexts resulted in improved teacher instructional practices and student literacy achievement. The study compared outcomes for a group of students who participated in FPC

programming and a matched comparison group of nonparticipating students. Propensity score matching was conducted using NWEA MAP Growth Reading data to identify similar students who did not participate in FPC in the same state for the matched comparison group.

Sample

Educators

Forty-two of the 93 (45%) K–3 teachers invited to participate completed the survey. The grade levels taught by teachers varied and few taught multiple grades: 24% taught Kindergarten, 28% taught Grade 1, 31% taught Grade 2, and 19% taught Grade 3. On average, teachers reported having about 16 years of teaching experience, 11 years of experience teaching in their current school, and 3 years using FPC Literacy resources. In addition, 16 K–3 teachers participated in focus groups; and 6 school administrators, including 3 principals and 3 instructional coaches, participated in interviews.

Students

Reading assessment data were collected from NWEA. The study focused on all K–3 students who took the MAP Growth Reading assessments during the 2022–2023 school year in Kentucky. Student records were available for 45,689 students. The study sample included students from 273 Kentucky schools who had both fall 2022 and spring 2023 achievement data (1,319 FPC and 30,295 comparison).

Analytic Sample

Propensity score matching was conducted using NWEA MAP Growth Reading data to identify similar students who did not participate in FPC in the same state based on observable characteristics, including: fall 2022 achievement score, race/ethnicity, gender, grade level, and whether they completed the MAP Growth Reading assessment for Grades K–2 or MAP Growth Reading assessment for Grades 3–5. The match used a 2:1 ratio of comparison to participating students, a caliper of 0.2, and the nearest neighbor matching approach. The matched analytic sample included 1,319 FPC participants and 2,637 matched comparison students (one FPC student had only one

matched comparison student, rather than two). To assess baseline equivalence on student reading achievement, RMC calculated effect sizes (within and across grades) using Hedges' g to compare differences among FPC participants and nonparticipants. (Hedges' g is an effect size measure for continuous variables. It quantifies the magnitude of the treatment effect, represented by differences in outcomes across groups.)

Baseline equivalence within range of statistical adjustment was observed in MAP Growth Reading test scores between FPC and matched comparison students across all four grade levels as Hedges' g was smaller than 0.25. Therefore, the matched comparison group was considered equivalent to the baseline achievement measures according to What Works Clearinghouse review standards. To further assess baseline equivalence, RMC also calculated effect sizes (within and across grades) using Hedges' g and Cox's d to compare differences among FPC participants and nonparticipants on a range of student characteristics. Effect sizes were all smaller than 0.05. (Cox's d is an effect size measure for dichotomous variables. It quantifies the difference in the probabilities of an event occurring between two groups.)

Achievement Analyses

Baseline scores and student characteristics were included as covariates in the impact model. RMC fit a single-level regression model to estimate the impact of participation in FPC districts on MAP Growth Reading scores. Fall 2022 scores served as baseline measures and spring 2023 scores as outcome measures. The following general model was used:

$$Y_i = \beta_0 + \beta_1 \text{Baseline}_i + \beta_2 T_i + \beta_3 \text{Covariate} + e_i$$

where Y_i represents the outcome variable (the score on the MAP Growth Reading assessment for student i in spring 2023), β_0 is the intercept, β_1 is a parameter representing the association between the baseline achievement measure and the outcome, Baseline_i is each student's baseline (fall 2022) achievement measure, T_i is the intervention indicator variable (1 = intervention; 0 = comparison), β_2 is the coefficient

representing the impact of FPC on Y_i , β_3 represents a vector of student characteristics including gender, race, and the assessment students took, and e_i represents the random effect for student i 's outcome score from the predicted score based on the model. Our focus is on β_2 , the FPC intervention effect which is used to estimate the mean difference in scores between FPC participants and nonparticipants. This adjusted mean difference was used to calculate the effect size (Hedges' g) and the improvement index.

Given that 20% of the comparison schools represented in the analytic sample had fewer than five students, the study did not use hierarchical or multilevel models because the number of students per school was expected to be insufficient for explicitly modeling the within-school correlation of outcomes. However, a sensitivity analysis using two-level hierarchical linear modeling found similar results as the single-level impact analysis.

Results

Student Outcomes

Analysis indicated that a significant positive difference was found between FPC and comparison students on the NWEA MAP Growth Reading assessment. This result suggested a positive impact of participating in FPC across Grades K–3, with an adjusted mean difference of 1.47 ($p < 0.01$). The effect size was $g = 0.09$, with an improvement index of 3.69. The improvement index (What Works Clearinghouse, 2022) estimates the expected change in percentile rank for an average comparison student if they had been in the intervention group. An improvement index of 3.69 is equivalent to a comparison student improving from the 50th percentile to better than the 53rd percentile if they had participated in FPC. Significant positive results associated with participation in FPC were also observed for Grades 1, 2, and 3 (See Table 1 below). Results for Kindergarten students did not show a significant impact of participation in FPC. See Appendix A for the full model results.

In addition, a sensitivity analysis was conducted using two-level hierarchical linear modeling (HLM) to assess FPC program impact on NWEA MAP Growth Reading scores with students nested within schools. Analysis revealed significantly higher reading outcomes for students who attended schools using FPC compared to those in comparison schools after controlling for school FRL population, baseline achievement, and student characteristics ($\beta = 1.55, p = 0.01$). See Appendix B for additional details and model results.

Table 1. Impact analysis results for FPC and comparison students: NWEA MAP Growth Reading Assessment

Grade	Group	Students	Unadjusted Scale Score Mean (SD)	Scale Score Adjusted Mean (SE)	p-value	Effect Size	Improvement Index
Grade K	FPC	19	160.00 (8.24)	3.28 (2.52)	0.20	0.37	14.58
	Comparison	31	159.06 (9.07)				
Grade 1	FPC	471	176.67(10.36)	0.94 (0.47)	0.04*	0.09	3.67
	Comparison	944	175.89 (10.11)				
Grade 2	FPC	393	190.93 (12.78)	2.19 (0.60)	<0.001***	0.17*	6.88
	Comparison	794	188.61 (12.55)				
Grade 3	FPC	436	201.60 (12.81)	1.40 (0.51)	0.006**	0.11	4.41
	Comparison	868	200.32 (12.55)				
All Students	FPC	1,319	188.92 (16.05)	1.47 (0.30)	<0.001***	0.09*	3.69
	Comparison	2,637	187.56 (15.79)				

Table note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Teacher Insights

Frequency of FPC Use

Survey respondents were asked to describe how frequently they used various FPC components in their classrooms. Ninety-one percent of teachers reported using Interactive Read-Aloud daily (an additional 9% reported using it three to five times a week). The majority of teachers reported using Guided Reading (88%), Reading Minilessons (81%), and Independent Reading (72%) three to five times a week. Shared Reading was also used extensively, with 95% of teachers reporting weekly use (and 60% reporting use three to five times a week).

Quality of FPC Resources

Survey respondents were asked to rate the overall quality of Interactive Read-Aloud and Shared Reading text collections, as well as the quality of specific FPC components. Overall, almost all respondents indicated that the Interactive Read-Aloud (100%) and Shared Reading (87%) text collections were good or excellent quality. Of the teachers who reported using each FPC component, the most

consistently high-rated components were the FPC 40-Day Implementation Plans (100% good or excellent), Interactive Read-Aloud (95% good or excellent), and Book Clubs (91% good or excellent). The Fountas & Pinnell Digital Subscription for Guided Reading, Prompting Guides, and Independent Reading were also rated good or excellent by more than 85% of respondents.

Interview and focus group participants reported that Interactive Read-Aloud was the strongest FPC context. The comment below provides additional insight:

- [Interactive Read-Alouds] are a wonderful way to bring in rich vocabulary and bring in background information about cultures and different situations. It opens the door for our students to other ways of life as a rural district. I love that they're [organized] by theme and high rigor.

Support for FPC Implementation

Survey respondents were asked to describe the usefulness of various professional development opportunities. Almost all (95%) reported participating in some form of professional development. Respondents reported spending between 0 and 80 hours on professional development activities, with an average of 32 hours. More than half of participants who participated in each professional development activity reported that work with a FPC Literacy Consultant (68%) and FPC online professional development (55%) were moderately or extremely helpful. When asked if there were any other professional development activities that were helpful, teachers cited classroom observations done by the FPC Consultant and a pacing guide provided by the district.

Focus group and interview participants provided insights into facilitators for successful implementation of FPC. Respondents identified one of the most important factors for successful implementation as continuous professional development to build staff capacity to understand and implement the contexts of FPC. Collaboration between all school staff and shared expectations for implementation was also described as a vital part of the success of FPC. The comment below provides additional insight from school leadership:

- I think the district providing continuous training [that] wasn't just a "one and done" [was helpful]. Some vertical planning and getting [teacher] feedback was also helpful. They want to know what they can improve on and about our next steps, celebrating the little successes along the way. That really helped continue our implementation.

Impact on Students

Teachers were asked about their perceptions of the impact of FPC on students. Teachers most frequently agreed that implementing FPC improved student engagement in discussion about the text (95%), understanding of the text through reading a variety of genres (90%), understanding the world from diverse perspectives (88%), ability to build/extend their knowledge of topics and themes (81%), reflection on

the meaning of the text (81%), and understanding/comprehension of the text, topic, and main idea (76%).

During interviews and focus groups with the Research Firm (RMC), teachers, instructional coaches, and school principals provided feedback on the impact of FPC on student achievement, behavior, and self-efficacy. Respondents indicated that implementing FPC had a positive impact on student literacy achievement and comprehension. Teachers also indicated that implementing FPC improved student confidence in their reading abilities or made reading more engaging. Some teachers highlighted the impact of FPC on student self-efficacy, mentioning an increase in students' desire to grow academically. Improved teacher-student relationships were also attributed to implementation of FPC. The comments below provide additional insight:

- I felt like the students that I had sent to 1st grade last year, were probably . . . among the strongest students with comprehension about being able to pull out elements of a story or author's purpose.
- I saw such great benefits in [Guided Reading] because we could talk about [student] strengths and weaknesses. It just gave them security to take risks in a small group.
- [FPC] gives them a lot of confidence [in that prior to participating in FPC,] they may have not had to speak in front of their peers, answer the questions, and talk about books, authors, characters, themes, and lessons.

Impact on Teacher Practice

Teacher survey respondents were asked about the impact of implementing FPC on their alignment of instruction to better support students. More than two thirds of teachers reported some or a lot of impact related to providing students with equitable literacy opportunities, having common expectations for student literacy achievement, and viewing students' literacy progress as a shared responsibility among teachers and administrators.

Teachers were also asked to rate the extent to which their responsiveness to students has been affected by FPC implementation, such as impacting student observations and assessment. Most reported some or a lot of impact on observation and analysis of student

learning behaviors to drive instruction (70%), engaging in systematic observation and assessment of individual readers (68%), and use of assessments to inform instruction (56%).

Interview and focus group respondents cited an impact of FPC on their ability to understand and address student needs. Teachers and administrators mentioned having a better understanding of their students' needs and being more flexible with their instruction to meet students where they are. The comments below provide additional insight:

- This has changed my mindset in terms of making sure that every kid gets what they need. We still have our standards to teach, but we also have to teach kids where they're at and this program gives us an opportunity to do that.
- Teachers know their students better than ever when it comes to reading instruction.
- [Teachers] had to see success to buy in, the program is overwhelming, but once they have richer conversations, they are more flexible now based on [their] kids' needs, more comfortable to do what they need to meet the needs of their kids, which helps them grow as instructors.

In addition, teacher survey respondents were asked to rate the impact implementing FPC had on use of texts and the use of the gradual release model. Eighty percent of teachers reported some or a lot of impact on the provision of students with more opportunities to engage with varied texts. Almost two thirds of respondents indicated some or a lot of impact on teachers' understanding of how to use different texts and teachers' use of the gradual release model.

Interview and focus group respondents highlighted an increased capacity to use a variety of texts to engage their students, discussing how providing a diverse range of texts has increased students' interest in reading. One respondent highlighted how FPC provided an opportunity to expose students to rich vocabulary in different genres that teachers may not have selected otherwise. The comments below provide additional insight:

- I think the program has helped [students] become more seasoned readers; they can even name different authors.
- It grows [students'] love for reading because we're exposing them to a lot of different genres of books and there's always [a] book that kids are excited about.
- Just using rich literature to reach all students, regardless of their level, gives an opportunity to expose students to rich vocabulary from a variety of genres that our teachers may not have selected in the past.

Teacher survey respondents were asked to rate the extent to which they agree with a variety of statements regarding how aspects of their practice have changed as a result of FPC implementation. Teachers most frequently reported that improvements in student learning occurred because of improved teaching practices (77%), that reflecting on teaching practices allowed for adjustment to student needs (76%), and that they could teach new lessons successfully (75%).

Interview and focus group respondents highlighted the impact of FPC on their confidence to teach literacy. Teachers discussed new teaching practices or components that have improved their ability to encourage student thinking. Teachers also highlighted increased confidence in implementing the contexts of FPC. The comments below provide additional insight:

- I do not think that I have ever questioned these kids like I questioned them now and it has created thinkers.
- As time goes on, I have seen [more] confidence from last year to this year in teachers' ability in using and implementing FPC.
- [In terms of] foundational elements of literacy, I've become better, and I've learned the importance of teaching phonics and whole words.

Conclusion

This *Fountas & Pinell Classroom (FPC)* research results paper presents findings from a mixed-method quasi-experimental design (QED) research study conducted by RMC Research Corporation. To measure the impact of FPC on student outcomes, RMC collected and analyzed quantitative and qualitative data describing FPC implementation and

student outcomes during 2022–2023 in one school district in Kentucky. Quantitative data include survey responses from 42 teachers in Grades K–3 and NWEA MAP Growth Reading assessment scores from 1,319 FPC student participants and 2,637 matched comparison students in the same state that did not use FPC. Qualitative data reflects interviews with 6 school administrators (e.g., principals and instructional coaches) and focus groups with 16 Grades K–3 teachers.

The study was designed to provide descriptive and correlational evidence of the influence of FPC on teacher and student outcomes, as well as educator feedback on the FPC contexts. In summary, key findings from the study include the following:

- 1. Participation in FPC had a statistically significant and positive impact on NWEA MAP Reading scores for students in Grades K–3.** A significant positive difference was found between FPC participants and matched comparison students on spring 2023 Reading achievement scores, suggesting a positive impact of FPC (effect size = 0.09; improvement index = 3.69). This finding suggests that a student in the comparison group would improve from the 50th percentile to better than the 53rd percentile if they had received FPC programming.
- 2. Most teachers and administrators agreed that FPC positively influenced student outcomes.** Interview and focus group participants reported that using FPC contributed to improved student literacy achievement and comprehension. Some teachers also highlighted an improvement in student confidence reading in front of others. Teacher survey respondents identified a variety of positive effects for students who participated in FPC, including increased student engagement through discussion, understanding of texts through different genres, and understanding of the world from different perspectives.
- 3. Teachers and administrators reported that FPC implementation contributed to improved teacher instructional practices.** Teacher surveys and focus group data suggest that FPC had a positive impact on how teachers perceive their instructional practices. Most teacher survey respondents indicated that implementing FPC resulted in providing students with equitable literacy opportunities, establishing common expectations for student literacy achievement, observation and analysis of student behavior to drive instruction, opportunities for students to engage with varied texts, and an increased tendency among teachers to attribute student success to their instruction. Interview and focus group participants highlighted similar themes, reporting that teachers knew their students better, that FPC allowed them to expose students to rich vocabulary from different genres, and that their literacy instruction improved.
- 4. The implementation of FPC contexts varied and teachers used Interactive Read-Aloud most frequently.** All teachers reported using Interactive Read-Aloud at least three times a week. Other frequently implemented components included Shared Reading, Reading Minilessons, Guided Reading, and Prompting Guides. Most survey respondents indicated using Book Clubs and Writing Minilessons monthly or less often. Participants also agreed that Interactive Read-Aloud was one of the best components of FPC, exposing students to a variety of vocabulary in different genres and encouraging students to think from different perspectives.
- 5. Most teachers reported positive experiences with professional development provided by FPC.** Most teachers reported receiving professional development at least once a year from their district's FPC consultant or their school's instructional coach. Some focus group respondents indicated learning to use FPC from veteran teachers in their school. Several teachers indicated that working with the FPC consultant was one of the most useful professional development experiences they received. Some focus group participants specifically appreciated the classroom observations, which provided them with actionable feedback on their work.

Appendix A

Analysis of FPC Participation on Achievement Outcomes: Full Model Results

Tables A1 through A5 present full model results for models examining the impact of FPC.

Table A1. NWEA MAP Growth Reading Assessment full model impact analysis results: Kindergarten

Covariates	Coefficient	SE	z	p-value	95% Confidence Interval
FPC	3.28	2.52	0.14	0.20	−1.80, 8.35
Baseline Achievement	1.01	0.15	0.72	<0.001***	0.79, 1.41
Female	−3.94	2.44	−0.17	0.11	−8.86, 0.98
Student of Color	−1.43	3.21	−0.05	0.66	−7.90, 5.04
Intercept	−0.04	22.66		0.99	−45.68, 45.59

Table note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. K–2 Test was excluded as a covariate because all Kindergarten students completed the Grade K–2 test.

Table A2. NWEA MAP Growth Reading Assessment full model impact analysis results: Grade 1

Covariates	Coefficient	SE	z	p-value	95% Confidence Interval
FPC	0.94	0.47	0.03	0.04*	0.03, 1.85
Baseline Achievement	0.88	0.02	0.78	<0.001***	0.84, 0.92
K–2 Test	−12.11	5.86	−0.04	0.04*	−23.59, −0.62
Female	0.45	0.44	0.02	0.31	−0.41, 1.32
Student of Color	−0.71	0.50	−0.02	0.15	−1.69, 0.27
Intercept	46.98	6.89		<0.001***	33.46, 60.49

Table note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A3. NWEA MAP Growth Reading Assessment full model impact analysis results: Grade 2

Covariates	Coefficient	SE	z	p-value	95% Confidence Interval
FPC	2.19	0.60	0.07	<0.001***	1.02, 3.36
Baseline Achievement	0.77	0.02	0.79	<0.001***	0.73, 0.80
K–2 Test	−5.89	5.62	−0.02	0.30	−16.91, 5.13
Female	−0.46	0.57	−0.01	0.42	−1.58, 0.65
Student of Color	−0.81	0.64	−0.02	0.20	−2.06, 0.43
Intercept	56.02	3.05		<0.001***	50.04, 62.00

Table note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A4. NWEA MAP Growth Reading Assessment full model impact analysis results: Grade 3

Covariates	Coefficient	SE	z	p-value	95% Confidence Interval
FPC	1.40	0.51	0.04	0.006**	0.40, 2.40
Baseline Achievement	0.76	0.02	0.81	<0.001***	0.73, 0.79
Female	0.89	0.48	0.03	0.07	−0.06, 1.84
Student of Color	−1.48	0.55	−0.04	0.007**	−2.56, −0.40
Intercept	56.50	2.89		<0.001***	50.83, 62.17

Table note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. K–2 Test was excluded as a covariate, as all third-grade students completed the Grade 2–5 test.

Table A5. NWEA MAP Growth Reading Assessment full model impact analysis results: All students

Covariates	Coefficient	SE	z	p-value	95% Confidence Interval
FPC	1.47	0.30	0.04	<0.001***	0.88, 2.05
Baseline Achievement	0.79	0.01	0.83	<0.001***	0.77, 0.81
K–2 Test	−4.33	0.61	−0.12	<0.001***	−5.52, −3.14
Female	0.34	0.28	0.01	0.24	0.89, 0.99
Grade	−0.99	0.38	−0.05	0.01*	−1.73, −0.26
Student of Color	−2.05	0.32	−0.03	<0.01**	−1.68, −0.42
Intercept	53.91	1.66		<0.001***	50.66, 57.16

Table note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Appendix B

Impact Sensitivity Analysis

Methodology

A sensitivity analysis was conducted using two-level hierarchical linear modeling (HLM) to assess program impact on NWEA MAP Growth Reading scores with students nested within schools. Hierarchical linear modeling (HLM) is a statistical technique for analysis of data that have a hierarchical or nested structure. HLM is often most appropriate for this type of data because it accounts for variation in outcomes at each hierarchical level, allowing analysts to examine variation in student outcomes (and the factors that contribute to them) at the classroom and school levels.

Impact analysis models account for individual school characteristics, school-level condition (intervention or comparison), student characteristics, and baseline achievement scores. Student outcome scale scores were regressed on student-level indicators of baseline achievement, testing type, and student demographic covariates. The intervention indicator is included in the model at level 2. School-level covariates also included the proportion of students who received free or reduced-priced lunch (FRL). Continuous covariates (e.g., baseline scores) were grand-mean centered; dichotomous and categorical covariates (e.g., gender)

were not centered. The intervention effect was specified as random. Models were estimated using full information maximum likelihood estimation.

A series of impact models were fitted to ensure the best model fit. Models for this analysis included a null model used to assess the intraclass correlation coefficient (ICC estimates how much variance is explained by the clusters in HLM) (Model 1). The second model assessed impact estimates with student- and school-level covariates (Model 2). The third model assessed impact estimates that trimmed non-significant covariates (Model 3). Model 3 was the final model which provides the most accurate estimate of FPC program effect.

Findings

Analysis revealed significantly higher reading outcomes for students who attended FPC schools compared to those in comparison schools after controlling for school FRL population, baseline achievement, and student characteristics ($\beta = 1.55$, $p = 0.01$) (See Table B1). The final model accounted for 78% of the variance in outcome scores.

Table B1. FPC impact of NWEA MAP Growth Reading Assessment scores

Covariates	Coefficient	SE	z	p-value	95% Confidence Interval
Intercept	192.70	1.22		<0.001***	190.31, 195.09
Student-Level Characteristics					
Student of Color	-1.01	0.34	-0.02	<0.01**	-1.68, -0.35
Baseline Achievement	0.78	0.01	0.82	<0.001***	0.76, 0.80
K-2 Test	-4.47	0.60	-0.12	<0.001***	-5.66, -3.29
Grade	-0.94	0.37	-0.04	0.01*	-1.68, -0.21
Female	0.33	0.28	0.01	0.24	-0.22, 0.87
School-Level Characteristics					
FPC	1.55	0.62	0.04	0.01*	0.33, 2.77
% Free or Reduced-Priced Lunch	-0.03	0.01	-0.03	0.03*	-0.05, 0.00

Table note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. $N_{\text{schools}} = 218$, $N_{\text{students}} = 3,956$. Baseline scores are grand mean centered before analysis

Learn more about *Fountas & Pinnell Classroom* at
heinemann.com/collection/fpl

