CAPIT Reading: Proven to Accelerate Early Literacy Development and Kindergarten Readiness

An Evaluation by Johns Hopkins University's Center for Research and Reform in Education (JHU CRRE) in one of the nation's largest school districts.

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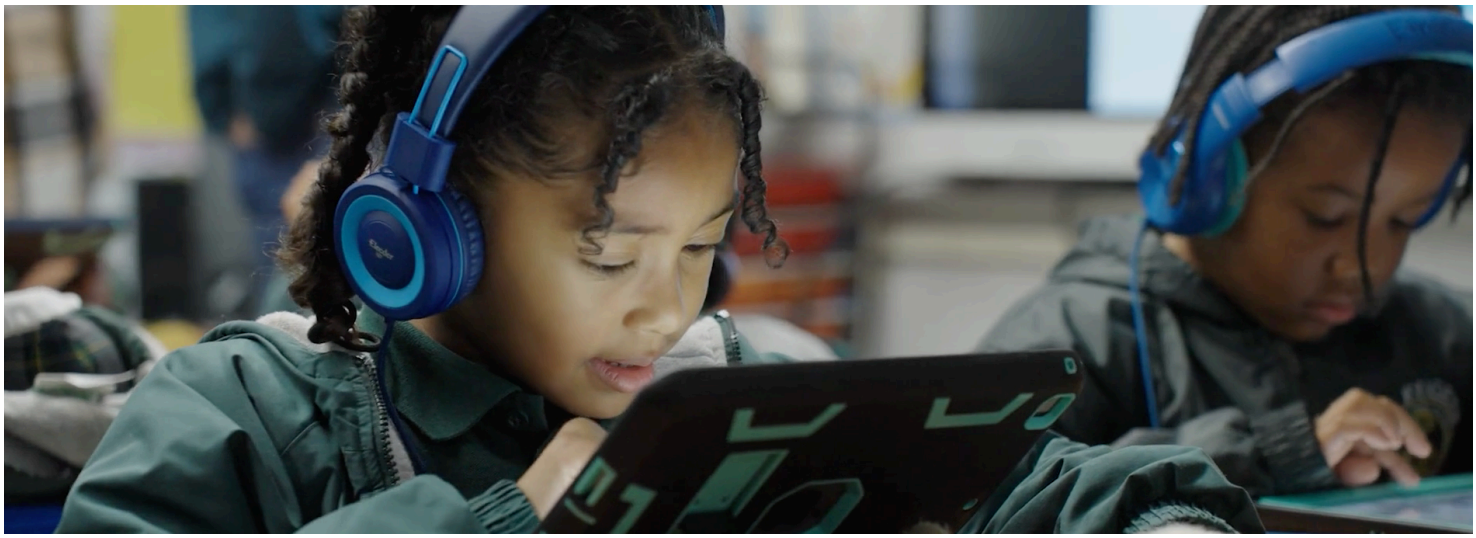
STUDY OVERVIEW

Johns Hopkins University conducted a comprehensive evaluation of the CAPIT Reading Curriculum in pre-kindergarten classrooms within a large Florida school district.



THE STUDY EXAMINED

A total of 1,488 pre-kindergarten students in over 80 schools in Orlando, Florida, recorded at least some level of CAPIT usage during the 2023-24 school year. This group of students was compared against a total of 858 pre-kindergarten students who did not receive any instruction through CAPIT during the outlined time period. The study examined:

EARLY LITERACY GROWTH
The impact of CAPIT on **early literacy growth** and **kindergarten readiness**.

TEACHER EXPERIENCE & PERCEPTION
Teachers' experiences using CAPIT and their perceptions of its effectiveness.

FAST STAR EARLY LITERACY EXAM
Student performance on the **FAST Star Early Literacy Exam**.

CONTROLLED STATISTCAL MODELS
Statistical models **controlled for students' gender, race/ethnicity, IEP status, age, baseline reading performance** on the FAST Star exam, and **economic status**.

KEY FINDINGS

CAPIT Students Significantly Outperformed Their Peers

Impact of Minimal CAPIT Usage

The students in this group used CAPIT for a minimum of one day of usage during the 2023 - 2024 school year.

> CAPIT students were **2.16 times more likely to achieve kindergarten readiness.**
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EARLY LITERACY GROWTH

Students using CAPIT grew faster on the FAST Star Early Literacy Exam than non-CAPIT students.

EXTRA LEARNING DAYS

CAPIT students gained an additional 13.73 scale score points, equal to **15 extra days of learning**.

GREATER LITERACY GAINS

When comparing **397 pre-K students using CAPIT** with **397 similar students** who are highly similar in terms of demographic characteristics and baseline achievement who didn't use CAPIT, CAPIT students showed **significantly greater literacy growth** on the **FAST Star assessment** from the beginning to the end of the year. On average, they gained **17.19 more scale score points, equivalent** to **19 extra days of learning** over a 180-day school year, compared to non-CAPIT students.

HIGHER KINDERGARTEN READINESS RATES

After controlling for other variables, **CAPIT students were 2.16 times more likely to achieve kindergarten readiness** compared to students in the demographically matched comparison group. Put differently, roughly **68 out of every 100 CAPIT students** were estimated to be ready for kindergarten, compared to only **32 out of every 100 non-CAPIT students** across the comparison group.

KEY FINDINGS

The More Students Engaged with CAPIT the Greater Their Literacy Gains

Impact of Frequent CAPIT Use

The students in this group used CAPIT for a minimum of 30 day of usage during the 2023 - 2024 school year.

ACCELERATED GROWTH

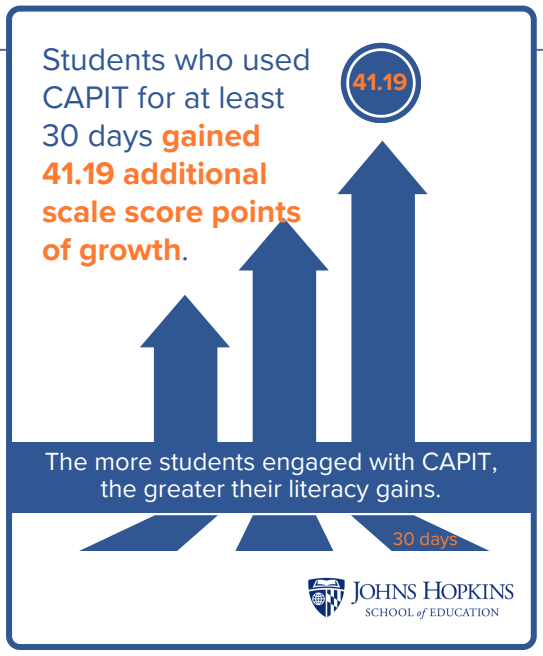
Students who used CAPIT for at least 30 days gained **41.19 additional scale score points of growth**, equivalent to **46 extra days of learning** over a 180-day school year, compared to students who did not use the program. This translates to an **additional 2 months of learning**.

USAGE IMPACT

For every **10 extra days of CAPIT use**, students **gained 14.2 additional scale points**.

ENGAGEMENT MATTERS

The more students engaged with CAPIT, the greater their literacy gains.

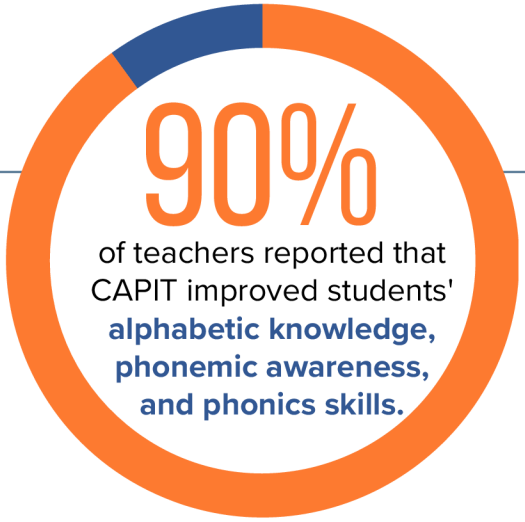


KEY FINDINGS

Teachers Praised CAPIT's Systematic Sound-to-Print Methodology

Teacher Survey

Teachers surveyed found CAPIT to be Highly Effective and Well-Received.



STRONGER LITERACY SKILLS

90% of teachers reported that CAPIT **improved students' alphabetic knowledge, phonemic awareness, and phonics skills**.

BETTER DECODING

80% of teachers said CAPIT **enhanced students' decoding abilities**.

HIGH TEACHER APPROVAL

Over 90% of teachers want to continue using CAPIT next year.

ENGAGING & EFFECTIVE

Teachers praised CAPIT's systematic Sound-to-Print Methodology and **mastery-based learning model** and reported that their students find CAPIT lessons and activities to be **engaging**.

WHY THIS MATTERS

This study provides clear, research-backed evidence that CAPIT accelerates early literacy development. We're seeing **preschoolers reading and spelling before kindergarten with an age-appropriate, engaging approach that kids love**—putting them **a full year ahead** of their peers!

CAPIT's approach ensures that students are:

- **Engaged and motivated** in their learning.
- **Building strong foundational literacy skills**.
- **Better prepared for kindergarten and beyond**.

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An Evaluation of CAPIT Reading in a Florida School District

The Center for Research and Reform in Education
Johns Hopkins University

Johns Hopkins University's Center for Research and Reform in Education (JHU CRRE), is currently conducting a mixed-methods evaluation of the CAPIT Reading Curriculum in pre-kindergarten classrooms in a large urban/suburban public school district in Florida. Broadly, the goals of this evaluation are to a) assess how implementation of the CAPIT curriculum may influence early literacy outcomes in pre-kindergarten students and b) gather information from program users (teachers) concerning their perceptions of CAPIT, including its effectiveness at enhancing reading engagement and literacy development in students, the utility of different program components, and overall areas of strength and weakness. Data collected as part of this evaluation includes that gathered through a comprehensive survey that was administered at the close of the 2023-24 school year to participating pre-kindergarten teachers utilizing CAPIT. Detailed teacher CAPIT usage data have been collected by the JHU CRRE research team, as well as student demographic and achievement data on the Florida Assessment of Student Thinking (FAST) Star Early Literacy Exam.

Key results of this evaluation are summarized below:

Teacher Survey: Key Findings

CAPIT appears to be very well-received by pre-kindergarten teachers

- Teachers consistently report that their students find CAPIT lessons and activities to be engaging.
- Teachers highlight that they find the program to be a useful early literacy supplement and believe the program is having a positive impact on students' initial development as readers.
    - Over 90% of teachers expressed that they feel the program has improved students' *alphabetic knowledge*, *phonemic awareness*, and *overall phonics skills*.
    - Over 80% of teachers indicated that they feel the program has improved students' *decoding* abilities.
- Consistent with previous research conducted on CAPIT in California (see Reilly & Storey, 2024), teachers regularly praise the program's unique instructional approach to teaching phonics – one which adopts a systematic sound-to-print orientation to reading instruction, while leveraging a mastery-based approach to student phonics practice. Over 90% of teachers expressed that they would like to use CAPIT again next year.

Student Achievement Analyses: Key Findings

Pre-kindergarten students receiving instruction through CAPIT Reading appear to significantly surpass other district pre-kindergarteners in terms of learning gains on the FAST Star Early Literacy Exam.

- Pre-kindergarten students in the district who received instruction through CAPIT achieved significantly greater literacy growth between the beginning and end of year administrations of the FAST Star assessment ($p < .01$). After controlling for other variables[1], students receiving instruction through CAPIT achieved 13.73 additional scale score points of growth during this timeframe compared to other students.[2] This growth corresponds with *roughly 15 additional days of learning* over the course of a 180 day school year relative to other pre-kindergarten students not using the program.

Comparing the growth of pre-kindergarten students receiving CAPIT to that of other district pre-kindergarteners who are highly similar in terms of demographic characteristics and baseline achievement also demonstrates notable support for the program.

- When matching 397 pre-kindergarten students in the district who received instruction through CAPIT to 397 similar students based on prior achievement and demographic characteristics, CAPIT students achieved significantly greater literacy growth between the beginning and end of year administrations of the FAST Star assessment ($p < .01$). After controlling for other variables, as in the previous analyses above, students receiving instruction through CAPIT achieved 17.19 additional scale score points of growth during this timeframe compared to similar non-CAPIT students.[3] This growth corresponds with *roughly 19 additional days of learning* over the course of a 180 day school year relative to other pre-kindergarten students not using the program.

- Pre-kindergarten students in the district who received instruction through CAPIT were also found to be significantly ($p < .05$) more likely to achieve "kindergarten readiness" by the close of pre-kindergarten, as defined by scoring 690 or higher on the end of year administration of the Fast Star. After controlling for other variables, CAPIT students were 2.16 times more likely to achieve kindergarten readiness compared to students in the demographically matched comparison group. Put differently, roughly 68 out of every 100 CAPIT students were estimated to be ready for kindergarten, compared to only 32 out of every 100 non-CAPIT students across the comparison group.

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[1] Statistical analyses involved a series of two-level hierarchical linear modeling (HLM) procedures in which students were nested within classroom/school clusters. Statistical models controlled for students' gender, race/ethnicity, IEP status, age, baseline reading performance on the FAST Star exam, and economic status (as measured by whether they qualified for free or reduced priced school lunch).

[2] A total of 1,488 pre-kindergarten students in the district recorded at least some level of CAPIT usage during the 2023-24 school year. Employing this "Intent-to-Treat" criteria as a model for treatment/comparison group assignment in this analysis, this group of students was compared against a total of 858 pre-kindergarten students in the district who did not receive any instruction through CAPIT during the outlined time period.

[3] Drawing from a pool of 25 classrooms with teachers who agreed to implement CAPIT with fidelity prior to the start of the study, 397 CAPIT students were matched to 397 similar non-CAPIT students through propensity score matching (PSM). PSM was conducted using each student's prior FAST Star achievement, gender, age, IEP status, FRL eligibility status, and race/ethnic minority status as matching variables.

Among those students who use CAPIT, amount of program use appears to be significantly correlated with the extent of students' literacy development -- with more use corresponding with greater gains.

- District pre-kindergarten students who received CAPIT instruction for *at least 30 days* (or more)[4] over the course of the school year achieved significantly greater literacy growth than students in the district not using the program at all ($p < .001$). After controlling for other variables, these students achieved an additional 41.19 scale score points of growth on the FAST Star during this timeframe compared to other students in the district.[5] This growth corresponds with *roughly 46 additional days of learning* over the course of a 180 day school year relative to other pre-kindergarten students not using the program.[6]

- Among those students who received instruction through CAPIT, scale score gains on the FAST Star assessment were found to significantly increase as amount of program usage increased ($p < .001$). This growth trajectory suggests that for every 10 additional days pre-kindergarten students used CAPIT, growth scores on the FAST Star increased by roughly 14.2 scale points.

[4] The district did not place any minimum usage threshold or other implementation requirements on teachers using CAPIT. District pre-kindergarten teachers were allowed to use their professional discretion in how frequently and often they employed CAPIT with their students during the 2023-24 school year.

[5] A total of 452 pre-kindergarten students in the district registered 30 or more days of CAPIT usage during the 2023-24 school year. In this analysis, these students were compared against 858 students who did not use the program at all during this time period.

[6] District student achievement data from the 2023-24 school year suggests that pre-kindergarten students' scale scores on the FAST Star Early Literacy exam typically increase by roughly 160 points between the start-of-year and end-of-year administrations of the assessment. Calculations of "additional days of learning" are estimated using this normative growth trend as a reference point.

An Evaluation of the CAPIT Reading Curriculum in a Florida School District

Student Achievement Trends

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Nathan Storey, Ph.D

February 2025

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Center for Research and Reform in Education

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Executive Summary

This study examined the impact of the CAPIT Reading Curriculum as implemented in pre-kindergarten classrooms across a large public school district in Florida. CAPIT Reading is a supplemental early literacy curriculum spanning three years that seeks to leverage science and technology to simplify the delivery of phonemic awareness and phonics lessons with the aim of enhancing their instructional effectiveness. Employing a systematic sound-to-print orientation to reading instruction while leveraging a mastery-based approach to student phonics practice, the program is designed to serve as Tier I RTI instruction for grades pre-kindergarten through first.

Broadly, the goals of this evaluation were to a) assess how implementation of the CAPIT curriculum may influence early literacy outcomes in pre-kindergarten students and b) gather information from program users (teachers) concerning their perceptions of CAPIT, including its effectiveness at enhancing reading engagement and literacy development in students, the utility of different program components, and overall areas of strength and weakness. Data collected as part of this evaluation includes that gathered through a comprehensive survey that was administered at the close of the 2023-24 school year to participating district pre-kindergarten teachers utilizing CAPIT. Detailed teacher CAPIT usage data were also collected by the research team, as well as student demographic and achievement data on the Florida Assessment of Student Thinking (FAST) Star Early Literacy Exam.

This report summarizes the results of this project's analyses of student achievement trends and works alongside the project's qualitative findings report, released in Fall 2024, which summarizes the results derived from teacher surveys administered as part of this project in Florida and synthesizes these qualitative results with those derived from earlier research conducted by JHU CRRE on CAPIT as utilized in California.[1] In specific, the present report highlights results of analyses of student early literacy trends for pre-kindergarten CAPIT users relative to other district pre-kindergarteners not receiving instruction through the program.

In brief, key findings from these achievement analyses include:

Pre-kindergarten students receiving instruction through CAPIT Reading appear to significantly surpass other district pre-kindergarteners in terms of learning gains on the FAST Star Early Literacy Exam.

- Pre-kindergarten students in the district who received instruction through CAPIT achieved significantly greater literacy growth between the beginning and end of year administrations of the FAST Star assessment during the 2023-24 school year ($p < .01$). After controlling for other variables[2], students receiving instruction through CAPIT achieved 13.73

[1] For more information, please see Reilly, J., & Storey, N. (2024). *An Evaluation of CAPIT Reading in California and Florida – Teacher Perceptions Report.* Baltimore, MD: Johns Hopkins University.

[2] Statistical analyses involved a series of two-level hierarchical linear modeling (HLM) procedures in which students were nested within classroom/school clusters. Statistical models controlled for students' gender, race/ethnicity, IEP status, age, baseline reading performance on the FAST Star exam, and economic status (as measured by whether they qualified for free or reduced priced school lunch).

additional scale score points of growth during this timeframe compared to other students. This growth corresponds with roughly 15 additional days of learning over the course of a 180 day school year relative to other pre-kindergarten students not using the program.

Comparing the growth of pre-kindergarten students receiving CAPIT to that of other district pre-kindergarteners who are highly similar in terms of demographic characteristics and baseline achievement also demonstrates notable support for the program.

- When matching 397 pre-kindergarten students in the district who received instruction through CAPIT to 397 similar students based on prior achievement and demographic characteristics, CAPIT students achieved significantly greater literacy growth between the beginning and end of year administrations of the FAST Star assessment ($p < .01$). After controlling for other variables, as in the previous analyses above, students receiving instruction through CAPIT achieved 17.19 additional scale score points of growth during this timeframe compared to similar non-CAPIT students.[3] This growth corresponds with *roughly 19 additional days of learning* over the course of a 180 day school year relative to other pre-kindergarten students not using the program.

- These pre-kindergarten students who received instruction through CAPIT were also found to be significantly ($p < .05$) more likely to achieve "kindergarten readiness" by the close of the school year, as defined by scoring 690 or higher on the end of year administration of the FAST Star. After controlling for other variables, CAPIT students were 2.16 times more likely to achieve kindergarten readiness compared to non-CAPIT users. Put differently, roughly 68 out of every 100 CAPIT students were estimated to be ready for kindergarten, compared to only 32 out of every 100 non-CAPIT students in the comparison group.

Among those students who use CAPIT, amount of program use appears to be significantly correlated with the extent of students' literacy development -- with more use corresponding with greater gains.

- District pre-kindergarten students who received CAPIT instruction for *at least 30 days* (or more) over the course of the school year achieved significantly greater literacy growth than students in the district not using the program at all ($p < .001$). After controlling for other variables, these students achieved an additional 41.19 scale score points of growth on the FAST Star during this timeframe compared to other students in the district. This growth corresponds with roughly 46 additional days of learning over the course of a 180 day school year relative to other pre-kindergarten students not using the program.[4]

[3] Drawing from a pool of 25 classrooms with teachers who agreed to implement CAPIT with fidelity prior to the start of the study, 397 CAPIT students were matched to 397 similar non-CAPIT students through propensity score matching (PSM). PSM was conducted using each student's prior FAST Star achievement, gender, age, IEP status, FRL eligibility status, and race/ethnic minority status as matching variables.

[4] District student achievement data from the 2023-24 school year suggests that pre-kindergarten students' scale scores on the FAST Star Early Literacy exam typically increase by roughly 160 points between the start-of-year and end-of-year administrations of the assessment. Calculations of "additional days of learning" are estimated using this normative growth trend as a reference point.

- Among those students who received instruction through CAPIT, scale score gains on the FAST Star assessment were found to significantly increase as amount of program usage increased ($p < .001$). This growth trajectory suggests that for every 10 additional days pre-kindergarten students used CAPIT, growth scores on the FAST Star increased by roughly 14.2 scale points.

Introduction and Background

The present report describes the results of an evaluation of the CAPIT Reading Curriculum as implemented in pre-kindergarten classrooms across a large public school district in Florida. Conducted by Johns Hopkins University's Center for Research and Reform in Education (JHU CRRE), this mixed-methods evaluation seeks to assess teachers' perceptions of CAPIT after using the program as a supplemental reading curriculum during the 2023-24 school year, and also sought to assess if students receiving instruction through this supplemental reading program achieved greater learning gains in early literacy as compared with other district preschool students who do not receive instruction through the program.

In brief, the CAPIT Reading curriculum, which was adopted and utilized across many district VPK (voluntary pre-kindergarten) classrooms during the 2023-24 school year, aims to use science and technology to simplify the delivery of phonemic awareness and phonics lessons with the aim of enhancing their instructional effectiveness. The program includes a comprehensive Phonics and Phonemic Awareness Curriculum[5], which is based on the latest findings of contemporary reading research and cognitive science, as well as input from experienced classroom reading teachers. Professional development[6] provided through the program aims to immerse educators in the Science of Reading with the goal of preparing them to teach phonics explicitly and systematically with scripted daily lessons. Ongoing coaching is also provided for all teachers and reading specialists. Ultimately, the program's instructional design and digital platform aims to engage students as they master meaningful texts on their individualized learning path and provides current and actionable student data to all stakeholders.

Given these features of the program's instructional design, as well as the program's adoption across many VPK classrooms in the district during the 2023-24 school year, CAPIT Reading represents a particularly important research target. As such, the goals of this evaluation were to a) assess how implementation of CAPIT may influence student achievement outcomes in reading and b) gather information from teachers concerning their perceptions of CAPIT, including its effectiveness at enhancing reading engagement and literacy development in students, the utility of different program components, and overall areas of strength and weakness.

This report exclusively summarizes the results of this project's analyses of student achievement trends and works alongside the project's qualitative findings report, released in Fall 2024, that summarizes the results derived from teacher surveys administered as part of this project in Florida and synthesizes these qualitative findings with those derived from earlier research conducted by JHU CRRE on CAPIT as utilized in California.[7] *In specific, the present report highlights results of analyses of student early literacy trends for pre-kindergarten CAPIT users relative to other district pre-kindergarteners not receiving instruction through the program, and*

[5] For further information, please visit https://www.capitlearning.com/tier-1-core-phonics-supplement

[6] For further information, please visit https://www.capitlearning.com/professional-learning

[7] For more information, please see Reilly, J., & Storey, N. (2024). *An Evaluation of CAPIT Reading in California and Florida – Teacher Perceptions Report.* Baltimore, MD: Johns Hopkins University.

aims to provide an overall estimate of the program's relative impact at this important developmental juncture.

Program Context and Earlier Research

In terms of context, this project, and more specifically, the results of quantitative analyses discussed as part of this report, situate as part of broader, ongoing research conducted by JHU CRRE on CAPIT Reading. As highlighted in the preceding section, JHU CRRE has conducted previous research on CAPIT as implemented with primary grades students in Southern California, and has also collected user perceptions data from teachers implementing the program across California and Florida. In brief, findings from this earlier research demonstrated support for its use with elementary age students in the primary grades (kindergarten and first grade)[8] and described teachers' attitudes toward using the program – including areas of perceived program strength and weakness[9].

In terms of the research examining the program's use with elementary schools in Southern California, findings demonstrated that though schools varied widely in their fidelity of implementation with the program, that when used at a threshold of at least 20 days over the course of both the kindergarten and first grade school years, students achieved significant, meaningful growth across a variety of important areas. Notably, analyses of achievement trajectories demonstrated that students made statistically significant progress over the course of the first grade year in terms of their overall early literacy development (as measured by their overall scale scores on the Star Early Literacy Exam), as well as across each of the major subdomains covered in this exam – including those related to mastering alphabetic principles, word concepts, visual text discrimination, phonemic awareness, phonics, structural text analysis, vocabulary, and sentence-level and paragraph-level comprehension, alike. Analyses comparing CAPIT students' end of year achievement outcomes against other students who participated in "business-as-usual" literacy instruction demonstrated additional promising results. In these analyses, CAPIT students' end of year achievement directionally exceeded that of the comparison group on the Star exam overall, while exceeding that of the comparison group by a statistically significant margin on seven of the eight literacy domains assessed as part of the exam. Though the generalizability of these findings was limited by the small available sample of students who crossed this usage threshold, these results provided a valuable, informative overview of the program's utility with students in kindergarten and first grade.

Findings from qualitative research exploring teachers' experiences using the program further corroborated and expanded upon these results. Here results obtained through surveys of teachers in California and Florida (i.e., those as part of the current research project), suggest that CAPIT appears to be well-received by elementary teachers and pre-k teachers alike. Through this survey research, teachers at both grade spans expressed, routinely and enthusiastically, that they found the program to be a useful phonics supplement and that they believed the program is having

[8] For more information, see Reilly, J., & Storey, N. (2024). *An evaluation of the CAPIT Reading Curriculum in a Southern California School District.* Baltimore, MD: Johns Hopkins University.

[9] For more information, please see Reilly, J., & Storey, N. (2024). *An Evaluation of CAPIT Reading in California and Florida – Teacher Perceptions Report.* Baltimore, MD: Johns Hopkins University.

a positive impact on students' literacy development and overall learning. The vast majority of teachers at both grade spans expressed that their students found CAPIT lessons and activities to be engaging, and also highlighted a variety of key areas of literacy development where they perceive the program is having a positive influence. Close to 90% of program users expressed that they felt the program had improved students' alphabetic knowledge and roughly 85% identified improvements in phonemic awareness and overall phonics skills as well. In discussing the program's best-liked features, teachers were found to regularly highlight the program's instructional approach to teaching phonics – one which adopts a systematic sound-to-print orientation to reading instruction, while leveraging a mastery-based approach to student phonics practice. In making suggestions for program refinements or changes, teachers most frequently made light recommendations with regard to addressing sporadic technical glitches related to the program's auditory functions. Nearly unanimously, elementary and pre-k teachers both indicated that they would like to use the program again with their students in subsequent school years.

Situating as part of this broader research context, the findings described in this report seek to build on this existing scholarship and aim to examine how the program specifically functions with enhancing quantitative outcomes in *pre-kindergarten*. Expanding upon the aforementioned achievement trends of students at the close of first grade, the present report aims to summarize the program's apparent impact on even younger readers, and serves as a methodologically rigorous examination of CAPIT's influence on student achievement trends as measured through high-stakes benchmarking assessments.

Method

As outlined, the present study aimed to examine the impact of the CAPIT Reading program as implemented in voluntary pre-kindergarten classrooms during the 2023-24 school year. Utilizing a mixed-methods evaluation design, the project involved administering an end-of-school-year survey in May of 2024 to all district teachers implementing CAPIT Reading and also involved completing a data request with the district Research and Accountability Department to retroactively examine VPK student performance trends on the 2023-2024 FAST Star Early Literacy exams. The present report summarizes results specific to this project's analysis of student achievement trends and seeks to address the following research questions:

Evaluation Questions

1) How does participation in the CAPIT Reading Curriculum impact pre-kindergarten students' achievement in reading?
    a) Does level of program usage relate to student achievement effects?
        i) To what degree do effects vary across:
            (1) Teacher usage levels?
            (2) Student characteristics?

Setting and District Implementation Context

Participants in this study consisted of pre-kindergarten teachers and students in a large urban/suburban public school district in Florida. The district encompasses roughly 150 elementary schools and serves a student enrollment of approximately 200,000 students. In terms of demographic characteristics, roughly 60% of the student body is White, 30% is African American, and 5% is Asian. Just under half of students are reported as having Hispanic heritage.

In terms of implementation of CAPIT, during the 2023-24 school year, district elementary schools and teachers were given the opportunity to voluntarily adopt the program as a supplemental reading intervention for pre-kindergarten. At this time point, a set of 25 teachers from 23 district schools "opted in" to administering CAPIT with fidelity during the school year and were designated by CAPIT program developers to serve as a high-implementation case study group for the outlined school year. This being said, the district did not place any minimum usage threshold or other implementation requirements on teachers using the program during this time. Amongst the 466 pre-kindergarten student users of CAPIT in these 25 case study classrooms:

- 18 had 100 days or more of active usage in 2023-24
- 31 had 80 or more days of active usage in 2023-24
- 64 had 60 or more days of active usage in 2023-24
- 104 had 50 or more days of active usage in 2023-24
- 155 had 40 or more days of active usage in 2023-24
- 205 had 35 or more days of active usage in 2023-24
- 257 had 30 or more days of active usage in 2023-24
- 361 had 20 or more days of active usage in 2023-24

Across the entire district, 85 teachers (including those mentioned above who opted into the case study group) had access to and used CAPIT in their classrooms during the 2023-24 school year. During this timeframe, district pre-kindergarten teachers were allowed to use their professional discretion in how frequently and at what intervals they employed CAPIT with their students. In total, 1,488 pre-kindergarten students in these classrooms received at least some degree of instruction through CAPIT during the school year. Degree of program use varied, however, and is summarized below.

Of the 1,488 CAPIT users in pre-kindergarten:

- 18 had 100 days or more of active usage in 2023-24
- 32 had 80 or more days of active usage in 2023-24
- 74 had 60 or more days of active usage in 2023-24
- 136 had 50 or more days of active usage in 2023-24
- 250 had 40 or more days of active usage in 2023-24
- 338 had 35 or more days of active usage in 2023-24
- 452 had 30 or more days of active usage in 2023-24
- 737 had 20 or more days of active usage in 2023-24

Measures

Student achievement measure. Student scores on the Florida Assessment of Student Thinking (FAST) Star Early Literacy Exam served as the outcome variable in which student achievement growth was measured in this study. Part of the Renaissance Star Early Literacy family of assessments, the FAST Star is a widely utilized and respected benchmarking exam employed by the district to assess student learning progress on early literacy outcomes. Administered digitally to students, the exam is employed by the district across the primary grades at three time points each school year[10] to monitor student progress toward obtaining grade level learning goals in reading. The JHU CRRE research team filed a series of extant data requests with the district and coordinated with the district's Research and Accountability Department in procuring district-wide student achievement data on these exams for the 2023-24 school year. JHU CRRE also coordinated with CAPIT program developers in obtaining student level usage data for this school year as a means of identifying district program users and assessing the extent to which the program was utilized by schools.

Analytic Approach

As outlined, the present study aimed to examine the impact of the CAPIT Reading Curriculum on pre-kindergarten student learning outcomes in the district during the 2023-24 school year – with the present report explicitly summarizing results related to quantitative analyses associated with this research goal. For this study's main analyses in this area, Hierarchical Linear

[10] District students are administered the FAST Star assessment at the start of the school year (usually in August/September), at the approximate midpoint of the school year (in roughly January/February), and at the close of the school year (usually in May).

Modeling (HLM) with students nested within classrooms was used to examine differences in spring 2024 Florida Assessment of Student Thinking (FAST) Star Early Literacy exam reading achievement between CAPIT students and comparison group students, controlling for prior achievement (measured through either the Fall 2023 or Winter 2023/24 FAST Star) and other demographic covariates. These analyses were conducted utilizing students' overall scale score on the FAST Star as the primary outcome measure, with supplemental analyses examining students' performance on various subscales embedded within this overall score as well (e.g., subscales for phonemic awareness, phonics, etc.).

To examine associations between the extent of CAPIT usage and student achievement gains, the research team conducted analyses similar to the main impact analyses in which the treatment indicator variable was replaced with one of the available usage variables. These models allowed the research team to examine which usage variables were associated with improvement of CAPIT students' reading achievement. Across each of these models, analyses predominantly examined students growth spanning the full pre-kindergarten school year, utilizing beginning-of-year (fall) FAST Star performance as a baseline and end-of-year (spring performance) as the outcome. Exploratory analyses examining half-year outcomes and differences between students' fall-winter performance and winter-spring performance were also conducted and are presented in the appendix of this report.

Complementing these main analyses, the research team also investigated an additional model to estimate how CAPIT impacted the number of students who achieved kindergarten readiness (as measured by the FAST Star assessment) by spring 2024 versus the number of students who did not. These models used the same input variables as the initial HLM models, but used a logistic regression to predict the binary outcome that indicated whether each student improved from spring to fall. This binary outcome was formed by subtracting the spring score from the fall score, and any student with a value above 0 would be scored as 1, with the remainder of students scored 0. Results from the model in log odds are translated into odds (by exponentiation) and then probabilities (p = odds/1+odds) to illustrate how many out of 100 students would be predicted to improve. Estimated probabilities for the comparison group are estimated in the same way by converting the intercept coefficient into a probability. The treatment group probabilities accordingly combine the intercept added to the treatment coefficient.

Sampling Models

Using this overarching analytic approach, three different sampling models were employed as part of this study in an effort to most comprehensively examine how CAPIT performed as a literacy supplement in the district. Described in greater detail below, these sampling models encompassed three separate sets of analyses. These included:

1) A set of analyses in which *all district CAPIT users* were compared against all other pre-kindergarteners in the district (i.e., a district-wide analysis)

2) A set of analyses in which *high-fidelity CAPIT users* were compared against all other pre-kindergarteners in the district (i.e., a high-implementation analysis)

3) A set of analyses in which *high-fidelity CAPIT users* were compared against a *select sample of demographically similar district students* (i.e., the matched comparison-group analysis)

The findings from each of these sets of analyses, which are presented sequentially in the results section of this report, aim to complement each other and provide a more complete view of the potential influence of the CAPIT program on learning outcomes for students in pre-kindergarten. The specific sampling models employed in these analyses are described below.

1) For the ***"District-Wide" analysis*** outlined above, the literacy growth of all students who received any instruction through CAPIT was compared against that of the remaining pre-kindergarten students in the district. In this model, which aimed to employ an "intent-to-treat" approach, all students with one day or more of CAPIT usage were considered part of the treatment group, and all students with 0 days or no usage data were considered part of the comparison group. All analyses used to compare performance outcomes for these two groups controlled for the aforementioned achievement, demographic, and classroom/school characteristics specified in the Analytic Approach section of this report

2) For the ***"High-Implementation" analysis,*** the literacy growth of students in select high-implementing classrooms who received instruction through CAPIT was compared against that of the remaining pre-kindergarten students in the district. This analysis was intended to allow the research team to examine the usage of CAPIT for students when it was more substantively implemented. A threshold was created, with students with 30 days or more of active CAPIT usage forming the treatment group, and those with between 1-29 days being dropped from the sample. Students with 0 days or no usage data again formed the comparison group.

3) For the ***"Matched Comparison-Group" analysis,*** the literacy growth of students in select case study *classrooms* who received instruction through CAPIT was compared against a select matched comparison group of students from across the district that were highly similar to the CAPIT users in terms of baseline achievement and demographic characteristics. Prior to the district's adoption of CAPIT at the start of the 2023-24 school year, a set of 25 teachers "opted in" to administering CAPIT with fidelity during the school year and were designated by CAPIT program developers to serve as a high-implementation case study group for the school year. Students from this set of classrooms were matched with demographically similar students from across the district who did not use CAPIT at all, who formed a comparison group.

Student Achievement Analyses

The following section summarizes the findings of analyses examining student achievement trends with CAPIT students in the participating district. Findings related to the program's overall usage and implementation patterns in the district are discussed first, along with the analytic procedures used to best conform to this implementation context. Conclusions and a discussion of these findings are then provided at the close of this document.

Student Achievement Sample, Methodology, and Analytic Approach

As discussed in the preceding section, the JHU CRRE research team analyzed student scores on the Florida Assessment of Student Thinking (FAST) Star Early Literacy Exam to compare early reading outcomes at the end of pre-K for students participating in CAPIT with those receiving "business-as-usual" instruction across the remainder of the district. Students who completed pre-kindergarten and took the FAST assessment during the 2023-24 school year served as the sample group for the outlined analyses.

District Implementation Context and Analytic Sampling Models. Given the implementation context of the program in the participating district, in which there was no district-wide (or universal school-wide) adoption of the program, or specific oversight from the district with regard to implementation requirements, this study employed three analytic samples to examine the program's use. First, a district-wide sample was employed with the goal of understanding the achievement trends of the entire pool of CAPIT recipients across the district. In this sampling model, any and all students who completed at least one day of CAPIT usage were considered part of the treatment group. This conservative sampling model is widely used across evaluations adhering to design standards from education research databases such as Evidence for ESSA and the What Works Clearinghouse.

To further examine the usage of CAPIT for students as it is more ideally intended to be implemented, a second sampling approach, "treatment on the treated" (TOT) was also employed. This analysis allows researchers to better examine outcomes that were more closely tied to whether participants actually received the intervention as intended (or, at least, at a reasonably meaningful threshold). In this approach, a treatment group is restricted to those program users who used the program at a select threshold to ensure that analytic results carry practical significance with regard to the inferred impact of *participating* in the actual intervention (rather than one's initial *assignment* to a given intervention). While these designs pose theoretical limitations related to sampling bias (e.g., those related "cherry picking" a sample), if done pragmatically, they often pose significant advantages with providing informative, meaningful insights into how interventions function and the impacts that their programming can foster. In the context of the district sample of pre-kindergarten users, a minimum of 30 days of active program use was selected as the treatment group threshold in this model. As demonstrated in the preceding section summarizing CAPIT's use across the district, this threshold was identified as a reasonable level of program exposure (roughly a month and a half of full program use or more) while still maintaining a large enough sample of students and classrooms to effectively carry out an HLM analysis and yield generalizable results.

Lastly, a final sampling approach was utilized in which students in select high-implementing CAPIT classrooms were compared against a matched-comparison group of students who were highly similar in terms of demographic characteristics and baseline literacy abilities at the start of pre-kindergarten. As outlined in the preceding section, prior to the district's adoption of CAPIT at the start of the 2023-24 school year, a set of 25 teachers "opted in" to administering CAPIT with fidelity during the school year and were designated by CAPIT program developers to serve as a high-implementation case study group for the school year. Students from this set of classrooms were matched with demographically similar students from across the district who did not use CAPIT at all, who formed a comparison group.

Treatment Sample Characteristics. As outlined, initial analyses employed a district-wide sampling model as a means of examining the program's impact as measured across all available students in the district who participated in the program to any extent during their Pre-K year. Accounting for students with missing achievement data, the full sample encompassed a total of 1,488 CAPIT pre-kindergarteners, compared against 858 other Pre-K students in the district. Table 1 provides a demographic overview of these groups, which can be generalized as a broad estimate the overall demographic composition of students using CAPIT in the district more widely:

Table 1
Treatment and Comparison Group Demographic Characteristics — District-wide Model

	All	CAPIT	Comparison
FAST Fall 2023 Score (m/sd)	581.12 (149.49)	585.38 (143.76)	573.08 (159.54)
Male	1,107 (49.91%)	697 (46.8%)	410 (44.5%)
Female	1,235 (50.17%)	791 (53.2%)	448 (52.2%)
American Indian	12 (0.5%)	10 (0.7%)	2 (0.2%)
Asian	92 (3.9%)	55 (3.7%)	37 (4.3%)
Black	794 (33.8%)	495 (33.3%)	299 (34.8%)
Hispanic	1,068 (45.5%)	671 (45.1)	397 (46.2%)
Multiple Races	101 (4.3%)	58 (3.9%)	43 (5.0%)
Native Hawaiian	15 (0.6%)	9 (0.6%)	6 (0.7%)
White	1,332 (56.8%)	861 (57.9%)	471 (54.9%)
IEP Status	132 (5.6%)	76 (5.1%)	56 (6.5%)
FRL Status	1,574 (67.1%)	990 (66.5%)	584 (68.1%)
Age (mean/sd)	5.12 (0.29)	5.12 (0.30)	5.13 (0.29)
N	2,346	1,488	858

Note 1. Percentages listed above are a function of all students who had available demographic data.

Baseline equivalency was met for the Pre-K sample, with a standardized mean difference of FAST Fall 2023 scores of 0.08 SDs. This confirms that CAPIT students (those that completed at least one day of CAPIT) had similar reading levels to comparison group students prior to participation in the CAPIT program. In comparing these students' literacy achievement outcomes at the end of Pre-K, independent samples t-tests were conducted to determine if students' scores differed to a significant extent on the FAST assessment. At the end of Pre-K, results of these analyses demonstrated that treatment students outperformed other students in the district in terms of their overall scale scores on the FAST Assessment [t = -4.09 (1914), $p < .001$; Treatment Scale Score M = 749.14, SD = 85.74; Comparison Scale Score M = 731.42, SD = 97.54]. These indicate

an effect size of +0.19 SDs. These results suggest that when used employing the limited implementation model described, CAPIT appears to support increased reading outcomes. To further examine the impact of the CAPIT program on Pre-K students' reading achievement, HLM models were used, as described in the following section.

Comparison of CAPIT Students' Achievement with Others in the District

To better understand how the end of Pre-K reading performance of these students compared against other students in the district who were receiving "business-as-usual" instruction, hierarchical linear modeling (HLM) analyses were conducted. In these models, individual student scores are "nested" within classrooms for all main impact analyses.

In conducting these analyses, we first examined the impact over the course of the entire school year. We next created models examining the impact over each semester (Fall-Winter and Winter-Spring). In each model, student-level covariates were included, including prior academic achievement, gender, IEP status (whether a student was identified as having an IEP), FRL status (whether students qualified for free- or reduced-price lunch), minority status, and age. As highlighted in Table 2 below, CAPIT students averaged over 13 points higher on the FAST assessment from BOY to EOY than did comparison students. The *p*-value and effect size (ES = + 0.19, as reported above) indicate that this difference in reading achievement gains is statistically significant, meaning that patterns of achievement gains differed for students in both conditions.

Table 2
Impact of CAPIT on Spring Reading Achievement Over a Full School Year – District-wide Model

	Estimate	Standard Error	t	df	p-value
Intercept	-10.25	5.65	-1.81	74.48	0.074 .
Treatment	13.73	4.36	3.15	1330.56	0.002**
FAST Fall Overall Score	0.26	0.02	15.24	1785.57	<0.001***
Gender	5.81	3.54	1.64	1771.72	0.100
IEP Status	-9.86	7.63	-1.29	1791.87	0.20
FRL Status	-13.48	3.91	-3.45	1797.29	<0.001***
Minority Status	11.51	3.92	2.94	1796.78	0.003**
Age	28.88	5.96	4.85	1769.34	0.001***
Variance of Constant	971.2				
Residual	5433.8				
Student N	1,815				
Class N	54				

*$p < .05$; ** $p < .01$; *** $p < .001$

The effect size of 0.20 estimates that a student in CAPIT gained 0.20 standard deviations more in their FAST reading score from fall 2023 to spring 2024 than students not in CAPIT.

We next examined the impact of the CAPIT program on student reading achievement over the course of each semester, as described in Tables 3 and 4, below. These models generally reflected the same trends seen over the course of the entire year of implementation. However, the treatment variable was not statistically significant in the Spring semester model (Table 4). This suggests that the majority of the impact from CAPIT on student learning may have taken place during the Fall semester, culminating in overall positive and statistically significant impacts on student reading achievement over the course of the school year. However, as usage data was not broken down by semester, this analysis is not able to confirm specific usage trends.

Table 3
Impact of CAPIT on Winter Reading Achievement Over the Fall Semester – District-wide Model

	Estimate	Standard Error	t	df	p-value
Intercept	-14.66	3.44	-4.26	65.74	<0.001***
Treatment	14.75	3.53	4.18	544.38	<0.001***
FAST Fall Overall Score	0.31	0.01	20.63	1879.86	<0.001***
Gender	0.96	3.11	0.31	1861.93	0.757
IEP Status	-6.35	6.74	-0.94	1879.43	0.347
FRL Status	-14.87	3.41	-4.36	1853.05	<0.001***
Minority Status	6.69	3.35	2.00	1470.07	0.046*
Age	25.47	5.27	4.83	1860.25	<0.001***
Variance of Constant	150.2				
Residual	4428.0				
Student N	1,888				
Class N	54				

*$p < .05$; ** $p < .01$; *** $p < .001$

Table 4
Impact of CAPIT on Spring Reading Achievement Over the Spring Semester – District-wide Model

	Estimate	Standard Error	t	df	p-value
Intercept	2.95	4.33	0.68	77.65	0.498
Treatment	2.51	3.49	0.72	1247.18	0.472
FAST Winter Overall Score	0.70	0.02	35.33	1792.24	<0.001***
Gender	4.51	2.84	1.59	1771.99	0.112
IEP Status	-5.11	6.11	-0.84	1792.75	0.404
FRL Status	-4.11	3.143	-1.31	1798.81	0.191
Minority Status	7.17	3.14	2.29	1787.18	0.022*
Age	12.96	4.80	2.70	1770.35	0.007**
Variance of Constant	535.6				

Residual	3494.1
Student N	1,813
Class N	54

*$p < .05$; ** $p < .01$; *** $p < .001$

Overall, CAPIT showed a significant positive impact on student reading achievement. Students who used CAPIT for at least one day scored an average of 13.7 points higher on the Spring 2024 FAST assessment than did otherwise similar comparison group students. This growth corresponds with *roughly 15 additional days of learning* over the course of a 180 day school year relative to other pre-kindergarten students not using the program.[11]

Relationship between Frequency of CAPIT Usage and Learning

In addition to the above district-wide analyses, we also sought to examine associations between the extent of CAPIT usage and student achievement gains. To accomplish this, we conducted analyses similar to the main impact analyses in which the treatment indicator variable was replaced with one of the available usage variables. These models allowed us to examine which usage variables were associated with improvement of CAPIT students' reading achievement.

In these analyses, we excluded non-CAPIT students (those who completed 0 days of CAPIT usage or had no usage data). In the analytic models, the treatment variable was replaced with the Usage variable, allowing us to examine the impact of usage on achievement scores. Once more, models were run examining the impact of CAPIT usage on reading achievement over the course of the entire school year, as well as for each semester. These models are described in Tables 7, 8, and 9.

Over the course of a full year of CAPIT implementation, CAPIT usage was a statistically significant predictor of FAST reading achievement at the end of Pre-K when also accounting for prior achievement. This trend was also seen over the course of each semester, with CAPIT usage appearing to be a statistically significant predictor of reading achievement over both the Fall and Spring semesters. The estimate is slightly smaller in the spring semester, reflecting trends seen in the previous set of analyses.

Table 7
Impact of CAPIT Usage Levels on Spring Reading Achievement Over a Full School Year

	Estimate	Standard Error	t	df	p-value
Intercept	-30.40	6.35	-4.78	54.70	<0.001***
CAPIT Usage	1.42	0.12	11.76	1141.73	<0.001***
FAST Fall Overall Score	0.23	0.02	11.56	1183.63	<0.001***

[11] District student achievement data from the 2023-24 school year suggests that pre-kindergarten students' scale scores on the FAST Star Early Literacy exam typically increase by roughly 160 points between the start-of-year and end-of-year administrations of the assessment. Calculations of "additional days of learning" are estimated using this normative growth trend as a reference point.

Gender	6.44	4.01	1.61	1168.39	0.108
IEP Status	-9.86	8.76	-1.13	1184.17	0.261
FRL Status	-7.61	4.37	-1.74	1181.62	0.082 .
Minority Status	7.85	4.48	1.75	1194.72	0.081 .
Age	18.24	6.73	2.71	1168.17	0.007**
Variance of Constant	1017				
Residual	4596				
Student N	1,204				
Class N	41				

*$p < .05$; ** $p < .01$; *** $p < .001$

Table 8

Impact of CAPIT Usage Levels on Winter Reading Achievement Over the Fall Semester

	Estimate	Standard Error	t	df	p-value
Intercept	-29.06	4.11	-7.08	81.89	<0.001***
CAPIT Usage	1.15	0.10	11.01	871.71	<0.001***
FAST Fall Overall Score	0.27	0.02	15.68	1233.84	<0.001***
Gender	1.78	3.60	0.50	1221.50	0.621
IEP Status	-4.22	7.90	-0.53	1233.23	0.593
FRL Status	-13.94	3.91	-3.57	1234.00	<0.001***
Minority Status	7.81	3.94	1.98	1117.95	0.048*
Age	24.46	6.07	4.03	1223.51	<0.001***
Variance of Constant	219.1				
Residual	3871.1				
Student N	1,242				
Class N	41				

*$p < .05$; ** $p < .01$; *** $p < .001$

Table 9

Impact of CAPIT Usage Levels on Spring Reading Achievement Over the Spring Semester

	Estimate	Standard Error	t	df	p-value
Intercept	-9.26	5.09	-1.82	55.95	0.074 .
CAPIT Usage	0.65	0.10	6.29	1125.78	<0.001***
FAST Winter Overall Score	0.68	0.02	28.81	1182.06	<0.001***
Gender	4.79	3.25	1.47	1167.19	0.141
IEP Status	-6.52	7.11	-0.92	1183.65	0.359
FRL Status	0.38	3.56	0.11	1180.38	0.916
Minority Status	2.50	3.64	0.69	1192.93	0.492
Age	2.91	5.49	0.53	1167.53	0.596

Variance of Constant	621.0
Residual	3023.0
Student N	1,203
Class N	41

*$p < .05$; ** $p < .01$; *** $p < .001$

Overall, higher levels of CAPIT usage showed a significant positive impact on student reading achievement. For those students who used CAPIT for one day or more, the results imply that for each additional day of CAPIT usage over the course of the school year, the outcome is expected to increase by 1.42 points.

Effects for High-Implementation Program Users

As outlined above, a more specified sampling model was employed as a secondary exploratory analytic procedure for the outlined study. Given the context of the program's implementation across the participating district, this was viewed as an informative, contextually appropriate means of further examining the current impact that CAPIT may be having on student early literacy outcomes in the district. After reviewing the program usage trends reported in the previous section, the JHU CRRE research team defined this treatment sample as including all students who participated in CAPIT in Pre-K and who recorded a minimum of 30 "active" days of program use. Though the developer recommended dosage of the program is 60 active days of use during the Pre-K school year, only a small number of current district Pre-K students (n = 74) were identified as meeting this usage criteria. While the minimum usage requirement of 30 days per year is demonstratively lower than this prescribed usage level, this was the highest usage threshold that could be employed while maintaining a more generalizable treatment sample (452 PreK students attained this usage threshold).

Employing this "30 day minimum across one year" definition to the treatment sample, Table 10 provides an overview of the demographic characteristics of this group relative to other students in the district. It should be noted that the outlined specified sample did differ in some ways to the comparison group. While demographically similar, CAPIT students significantly outperformed comparison group students at baseline (Fall 2023) (ES = +0.36). Due to these pre-existing differences in achievement, findings from these analyses should be considered to be exploratory and interpreted with appropriate caution.

Table 10
Treatment and Comparison Group Demographic Characteristics—Specified Model

	All	CAPIT	Comparison
FAST Fall 2023 Score	591.6 (139.3)	623.59 (85.62)	573.08 (159.54)
Male	615 (46.9%)	205 (45.4%)	410 (44.5%)
Female	695 (53.1%)	247 (54.6%)	448 (52.2%)
American Indian	5 (0.4%)	3 (0.7%)	2 (0.2%)
Asian	52 (4.0%)	15 (3.3%)	37 (4.3%)
Black	465 (35.5%)	166 (36.7%)	299 (34.8%)
Hispanic	583 (44.5%)	186 (41.2)	397 (46.2%)

Multiple Races	63 (4.8%)	20 (4.4%)	43 (5.0%)
Native Hawaiian	8 (0.6%)	2 (1.3%)	6 (0.7%)
White	717 (54.7%)	246 (54.4%)	471 (54.9%)
FRL Status	575 (43.9%)	301 (66.6%)	274 (31.9%)
IEP Status	80 (6.1%)	24 (5.3%)	56 (6.5%)
Age (mean/sd)	5.13 (0.29)	5.15 (0.30)	5.13 (0.29)
N	1,310	452	858

Note. The statistics presented in the "All" category encompass those in the CAPIT group and those in the comparison group.

The effect size of 0.61 estimates that a student in CAPIT gained 0.61 standard deviations more in their FAST reading score from fall 2023 to spring 2024 than students not in CAPIT. As noted above, we conducted three analyses with this sampling group, reflecting the impact of CAPIT over the course of the whole school year (Table 11), the fall semester (Table 12), and the spring semester (Table 13). In each model, Pre-K students with 30 days or more of CAPIT usage outperformed those in the comparison group.

Table 11
Impact of CAPIT on Spring Reading Achievement Over a Full School Year – Specified Model

	Estimate	Standard Error	t	df	p-value
Intercept	-15.84	9.64	-1.64	12.39	0.125
Treatment	41.19	5.98	6.89	890.87	<0.001***
FAST Fall Overall Score	0.25	0.02	10.52	853.72	<0.001***
Gender	5.34	4.50	1.19	853.22	0.236
IEP Status	-9.16	9.40	-0.97	863.65	0.330
FRL Status	-15.52	5.13	-3.03	885.97	0.003**
Minority Status	7.86	5.09	1.54	946.05	0.123
Age	30.75	7.68	4.00	843.01	<0.001***
Variance of Constant	3498.0				
Residual	4738.0				
Student N	996				
Class N	49				

*$p < .05$; ** $p < .01$; *** $p < .001$

Table 12
Impact of CAPIT on Winter Reading Achievement Over the Fall Semester – Specified Model

	Estimate	Standard Error	t	df	p-value
Intercept	-15.10	3.72	-4.06	34.26	<0.001***
Treatment	37.72	4.61	8.17	308.63	<0.001***
FAST Fall Overall Score	0.32	0.02	15.07	1028.81	<0.001***

Gender	2.52	4.01	0.63	1015.59	0.531
IEP Status	-10.36	8.48	-1.22	1020.84	0.222
FRL Status	-14.08	4.51	-3.12	1011.35	0.002**
Minority Status	0.82	4.33	0.19	837.99	0.850
Age	26.56	6.88	3.86	1016.18	<0.001***
Variance of Constant	202.7				
Residual	4037.6				
Student N	1,039				
Class N	48				

*$p < .05$; ** $p < .01$; *** $p < .001$

Table 13
Impact of CAPIT on Spring Reading Achievement Over the Spring Semester – Specified Model

	Estimate	Standard Error	t	df	p-value
Intercept	-0.11	4.45	-0.02	48.55	0.981
Treatment	20.35	4.80	4.24	545.72	<0.001***
FAST Winter Overall Score	0.58	0.03	21.49	984.20	<0.001***
Gender	3.20	3.85	0.83	967.94	0.406
IEP Status	-3.78	8.03	-0.47	970.17	0.638
FRL Status	-8.32	4.36	-1.91	986.88	0.057 .
Minority Status	8.76	4.24	2.07	951.84	0.039*
Age	18.55	6.60	2.81	964.89	0.005**
Variance of Constant	440.0				
Residual	3514.0				
Student N	995				
Class N	48				

*$p < .05$; ** $p < .01$; *** $p < .001$

As in the first analyses, CAPIT showed a significant positive impact on student reading achievement. Students who used CAPIT for at least 30 days scored an average of 41.2 points higher on the Spring 2024 FAST assessment than did comparison group students. This growth corresponds with *roughly 46 additional days of learning* over the course of a 180 day school year relative to other pre-kindergarten students not using the program.[12]

[12] District student achievement data from the 2023-24 school year suggests that pre-kindergarten students' scale scores on the FAST Star Early Literacy exam typically increase by roughly 160 points between the start-of-year and end-of-year administrations of the assessment. Calculations of "additional days of learning" are estimated using this normative growth trend as a reference point.

Performance of CAPIT Users with Demographically Similar Students

As discussed in prior sections of this report, in addition to the analyses above that examined the learning gains of pre-kindergarten CAPIT users compared to that of the *district at large*, additional analyses were conducted which compared outcomes for CAPIT users against *a demographically similar subgroup of students*. In this "matched comparison group analysis," the literacy growth of students in select case study classrooms who received instruction through CAPIT was compared against a matched comparison group of students from across the district that were highly similar to the CAPIT users in terms of baseline achievement and demographic characteristics. As noted, prior to the district's adoption of CAPIT at the start of the 2023-24 school year, a set of 25 teachers "opted in" to administering CAPIT with fidelity during the school year and were designated by CAPIT program developers to serve as a high-implementation case study group for the school year. Roughly 400 students from these combined classrooms were then paired with highly similar non-CAPIT users attending other district pre-kindergarten classrooms using a one-to-one/nearest neighbor Propensity Score Matching (PSM) procedure. Students were matched through PSM weighting based on prior achievement (FAST Star reading scale scores from fall 2023), gender, age, IEP status, FRL eligibility status, and race/ethnic minority status.

As shown in Table 14, the final analytic sample for this matched-comparison group analysis consisted of just under 800 students (397 in each group) that were shown to be highly similar between groups in terms of demographic characteristics and baseline achievement.

Table 14
Baseline Equivalency of Propensity Matched Sample

	Control	Treatment	p-value
FAST Fall Score (mean/sd)	597.50 (128.56)	600.16 (129.51)	0.772
Gender (Female) (n/%)	223 (56.2)	221 (55.7)	0.943
Age (mean/sd)	5.12 (0.29)	5.13 (0.30)	0.755
IEP Status (mean/sd)	0.07 (0.25)	0.06 (0.24)	0.770
FRL Eligibility Status (mean/sd)	0.65 (0.48)	0.66 (0.47)	0.710
Minority Status (mean/sd)	0.35 (0.48)	0.38 (0.49)	0.418
Attrition (number of students)[13]	38	6	-
N	397	397	

Employing the same Hierarchical Linear Modeling procedures utilized in the district-wide analysis and high-implementation analysis discussed in the preceding sections, the literacy growth of CAPIT students in these case study classrooms was compared against that of non-CAPIT students in the matched-comparison group. As shown in Table 15 below, this analysis found that CAPIT students achieved significantly greater literacy growth between the beginning and end of

[13] Attrition occurred through students lacking Spring 2024 achievement data on the FAST Star assessment. Overall sample attrition was calculated as 5.25%. Differential between the CAPIT group and the comparison group was calculated at 7.25%.

year administrations of the FAST Star assessment relative to those in the comparison group ($p < .01$). After controlling for other variables, including students' demographic characteristics and baseline achievement, students receiving instruction through CAPIT achieved 17.19 additional scale score points of growth during this timeframe compared to similar non-CAPIT students.[14] This growth corresponds with roughly 19 additional days of learning over the course of a 180 day school year relative to other pre-kindergarten students not using the program.

Table 15
Impact of CAPIT on Spring Reading Achievement Over the Full School Year

Predictor	Estimate	se	t-value	df	p-value	Confidence Interval
(Intercept)	-23.45	15.82	-1.48	15.405	0.158	[-57.1, 10.19]
Treatment	17.19	6.30	2.73	776.412	0.007 **	[4.82, 29.56]
FAST Fall Overall Score	0.20	0.02	10.51	717.404	<.001***	[0.17, 0.24]
Gender	3.14	5.04	0.62	718.770	0.533	[-6.75, 13.04]
IEP Status	-14.71	10.31	-1.43	717.506	0.154	[-34.95, 5.52]
FRL Eligibility Status	-20.66	5.54	-3.73	728.796	<.001***	[-31.53, -9.79]
Minority Status	17.28	5.73	3.02	742.852	0.003 **	[6.04, 28.52]
Age	43.05	8.50	5.06	716.856	<.001***	[26.36, 59.74]
Course Number (Intercept)	89.70					
Residual	68.19					

*$p < .05$; ** $p < .01$; *** $p < .001$

CAPIT Participation Impact on Kindergarten Readiness

In the context of these overall results, additional analyses were conducted that examined students' likelihood of crossing specific "readiness" thresholds as measured on the FAST Star. In specific, the district sets a threshold on the FAST Star to measure the "kindergarten readiness" of students, with students who achieve scores of 690 or higher being deemed to be ready to proceed to, and likely succeed in, kindergarten.[15] To further examine whether CAPIT students had a higher chance of achieving kindergarten readiness than students who did not participate in CAPIT, we conducted a logistic regression analysis. Based on the findings of this analysis, we were able to calculate the odds and probability of CAPIT students meeting the kindergarten readiness threshold compared to non-CAPIT students. Tables 16 and 17 show the results for reading achievement as measured by FAST Star scores, after adjusting for demographic variables.

[14] Drawing from a pool of 25 classrooms with teachers who agreed to implement CAPIT with fidelity prior to the start of the study, 397 CAPIT students were matched to 397 similar non-CAPIT students through propensity score matching (PSM). PSM was conducted using each student's prior FAST Star achievement, gender, age, IEP status, FRL eligibility status, and race/ethnic minority status as matching variables.

[15] The aforementioned "matched-comparison group" analytic sample was used to conduct the kindergarten readiness analysis.

Table 16
Impact of CAPIT on Kindergarten Readiness (690 Threshold)

	Estimate	Standard Error	*z*	p-value
Intercept	-1.31	0.18	7.10	<0.001***
Treatment	0.77	0.22	3.48	<0.001***
FAST Fall Overall Score	0.01	0.00	6.78	<0.001***
Gender	0.04	0.20	0.19	0.853
IEP Status	-0.68	0.36	-1.86	0.063 .
FRL Status	-0.36	0.22	-1.63	0.104
Minority Status	0.54	0.22	2.41	0.016*
Age	1.65	0.35	4.77	<0.001***
Student N	794			
Class N	35			

*$p < .05$; ** $p < .01$; *** $p < .001$

Table 17
Association between CAPIT participation and Kindergarten Readiness (690 Threshold)

Outcome	Estimate	Standard error	*p* value	
Spring 2024 FAST Kindergarten Readiness (690)	0.773	0.222	<0.005	
Kindergarten Readiness for Treatment Students	OR = 2.164	0. 0.480	<0.005	Prob = 0.684

Notes. 1. OR = Odds ratio. 2. Prob = Probability. 3. *N* =794 students (full PSM model)

Row 1 in Table 17 shows that students who participated in CAPIT experienced larger reading achievement gains than did comparison students and that this positive relationship was also statistically significant ($p < .05$). This is in line with the findings in the above analyses. The second row of Table 17 also shows the impact of CAPIT on whether students achieved kindergarten readiness as measured by the FAST assessment. The odds ratio can be interpreted as the odds of scoring 690 or higher (and therefore meeting the readiness requirement) for CAPIT students compared to non- CAPIT students with odds of 1. For example, students in CAPIT had 2.16 times higher odds of being ready for kindergarten compared to comparison students not in CAPIT. In other words, as a probability, roughly 68 out of every 100 CAPIT students were estimated to be ready for kindergarten, compared to only 32 out of 100 non-CAPIT students in the comparison group.[16]

[16] Estimated probabilities compare the constant coefficient for the comparison group to the constant plus treatment effect for CAPIT students, both translated into probabilities from the log odds in the model. See the Methods section for more information.

CAPIT Participation and Performance on FAST Subscales

Lastly, a final set of additional analyses were conducted that examined the performance of CAPIT students as measured across each of the nine subtests which cumulatively account for students' overall scores on the FAST Star assessment. In specific, the FAST Star assessment consists of questions spanning nine different subdomains, which collectively aim to assess the full scope of literacy skills addressed during the pre-kindergarten year. These subtests include those aimed at addressing skills related to knowledge of alphabetic principles, concepts of words, and vocabulary, and literacy skills related to visual discrimination, phonemic awareness, phonics, structural analysis of words, and sentence and paragraph-level comprehension. Using the matched-comparison group sample discussed in the previous section, the performance of CAPIT and non-CAPIT students were compared across each of these subdomains. As shown in Table 18 below, students in these groups were highly similar to one another in terms of their baseline performance on these each of these subdomains at the start of pre-kindergarten.

Table 18
Baseline Equivalency of Propensity Matched Sample on FAST Star Subscale Scores

	Control	Treatment	p-value
FAST Fall Score (mean (SD))	597.50 (128.56)	600.16 (129.51)	0.772
FRL Eligibility Status (mean (SD))	0.65 (0.48)	0.66 (0.47)	0.710
Gender (mean (SD))	0.56 (0.50)	0.56 (0.50)	0.886
Minority Status (mean (SD))	0.35 (0.48)	0.38 (0.49)	0.418
IEP Status (mean (SD))	0.07 (0.25)	0.06 (0.24)	0.770
Age (mean (SD))	5.12 (0.29)	5.13 (0.30)	0.755
Alphabetic Principle Subdomain Fall Score (mean (SD))	50.83 (17.71)	51.83 (17.37)	0.462
Concept of Word Subdomain Fall Score (mean (SD))	45.31 (17.14)	46.21 (16.93)	0.492
Visual Discrimination Subdomain Fall Score (mean (SD))	52.61 (17.95)	53.66 (17.56)	0.443
Phonemic Awareness Subdomain Fall Score (mean (SD))	21.81 (12.99)	22.37 (12.82)	0.572
Phonics Subdomain Fall Score (mean (SD))	21.00 (13.09)	21.56 (12.92)	0.572
Structural Analysis Subdomain Fall Score (mean (SD))	15.42 (11.30)	15.85 (11.09)	0.614
Vocabulary Subdomain Fall Score (mean (SD))	22.31 (13.12)	22.89 (12.92)	0.563
Sentence-Level Comprehension Subdomain Fall Score (mean (SD))	16.34 (12.02)	16.84 (11.80)	0.579
Paragraph-Level Comprehension Subdomain Fall Score (mean (SD))	15.10 (10.05)	15.48 (9.71)	0.618

N	397	397

In examining the performance growth of students over the course of the pre-kindergarten school year on each of these FAST Star subscales, CAPIT students were found to consistently outperform those in the comparison group. After controlling for demographic characteristics, classroom/school characteristics, and baseline achievement at the start of pre-kindergarten, students in the CAPIT group achieved significantly more growth on each of the nine subscales measured as part of this exam ($p < .01$ to $p < .001$). As shown in Table 19 below, CAPIT students outperformed the comparison group by a highly consistent margin of roughly 0.25 standard deviations on nearly all of the subscale categories measured. Though effect size estimates were highly similar across subscales, overall, areas related to knowledge of alphabetic principles, word concepts, and visual discrimination among text features appeared to be those areas where CAPIT students made the greatest gains relative to non-program users. Table 19 provides a summary of these trends, while tables presented in Appendix B provide a detailed overview of these findings for each subscale.

Table 19
Descriptive Statistics and Effect Sizes for Treatment and Control Groups across Subscales

Model Outcome Variable	**Mean (Treatment)**	**Mean (Control)**	**SD (Treatment)**	**SD (Control)**	**Cohen's d**	**p-value**
Alphabetic Principle	83.07	78.85	14.08	17.01	0.27	<.001***
Concept of Word	79.11	74.49	15.58	18.38	0.27	<.001***
Phonemic Awareness	55.84	50.53	20.10	21.39	0.26	<.001***
Phonics	55.70	50.25	20.57	21.86	0.26	<.001***
Structural Analysis	48.12	42.77	21.21	21.93	0.25	0.001 **
Vocabulary	56.29	51.03	19.87	21.21	0.26	<.001***
Visual Discrimination	84.31	80.17	13.51	16.60	0.27	<.001***
Sentence-Level Comprehension	50.80	45.17	21.89	22.76	0.25	0.001**
Paragraph-Level Comprehension	44.78	39.80	20.24	20.51	0.24	0.002**

Model Outcome Variable	Mean (Treatment)	Mean (Control)	SD (Treatment)	SD (Control)	Cohen's d	p-value

*$p < .05$; ** $p < .01$; *** $p < .001$

Summary and Conclusion

This evaluation examined early literacy outcomes for pre-kindergarten students whose teachers utilized the CAPIT Reading Curriculum as a supplemental literacy intervention during the 2023-24 school year. Utilizing Hierarchical Linear Modeling (HLM) as a lead analytic approach, the literacy progress of pre-kindergarten students in the district was compared between CAPIT and non-CAPIT users on the Florida Assessment of Student Thinking (FAST) Star Early Literacy Exam -- the district's lead benchmarking measure employed to assess students' early literacy development.

Results of these analyses demonstrated promising support for CAPIT's application as a key program employed with pre-kindergarteners across the participating district, as well as young readers in this age bracket more broadly. Pre-kindergarten students in the district who received instruction through CAPIT achieved significantly greater literacy growth between the beginning and end of year administrations of the FAST Star ($p < .01$) and were also found to be better positioned for achieving "kindergarten readiness" as measured through this exam ($p < .05$). These results were shown to be consistent, whether comparing CAPIT students against the performance of the district at large or against that of demographically matched peers. After controlling for other variables, CAPIT students were roughly twice as likely to qualify as being ready for kindergarten compared to demographically similar students (as defined by achieving a scale score of 690 or higher on the FAST Star). Perhaps most notably, among those students who used CAPIT, amount of program use appeared to be significantly correlated with the extent of students' literacy growth -- with more use corresponding with greater gains. Here, district pre-kindergarten students who received CAPIT instruction for at least 30 days (or more) over the course of the school year achieved significantly greater literacy growth than students in the district not using the program at all ($p < .001$). After controlling for other variables, these students achieved an additional 41.19 scale score points of growth on the FAST Star during this timeframe compared to other students in the district. This growth corresponded with roughly 46 additional days of learning over the course of a 180 day school year relative to other pre-kindergarten students not using the program.

Taken in combination with findings of qualitative portions of this study highlighting positive teacher experiences with using the program (see Reilly & Storey, 2024), as well as that of previous research conducted by JHU CRRE on this program in California, these results demonstrate key support for the CAPIT approach to early literacy, and are positioned well within the Tier III evidence categorization under the Every Student Succeeds Act (ESSA). Situating as part of a wider literature base examining unique approaches to early literacy instruction for primary grades students, particularly those emphasizing phonics-based techniques and Science of Reading philosophies, these findings contribute to a growing understanding of the strategies that can be employed to positive effects with early readers. Future research on the CAPIT approach, including that which examines the program's impact when applied with students over multiple school years will play a valuable role in expanding the scholarly research base pertaining to this unique and promising approach to early literacy development – and will help to inform its subsequent use in US school districts more broadly.

Appendix A: Fall and Spring Semester Growth Tables

Table A1
Impact of CAPIT on Winter Reading Achievement Over the Fall Semester

Predictor	Estimate	se	t-value	df	p-value	Confidence Interval
(Intercept)	-13.36	4.13	-3.23	26.457	0.003 **	[-21.84, -4.87]
Treatment	23.59	5.16	4.57	195.433	<.001***	[13.4, 33.77]
FAST Fall Overall Score	0.22	0.02	11.64	782.481	<.001***	[0.18, 0.26]
Gender	-3.70	4.92	-0.75	778.261	0.453	[-13.36, 5.97]
IEP Status	-6.94	10.06	-0.69	778.053	0.49	[-26.7, 12.81]
FRL Eligibility Status	-16.95	5.25	-3.23	696.535	0.001 **	[-27.26, -6.65]
Minority Status	15.75	5.25	3.00	533.111	0.003 **	[5.43, 26.06]
Age	37.72	8.32	4.53	778.990	<.001***	[21.38, 54.05]
Course Number (Intercept)	11.17					
Residual	67.50					

*$p < .05$; ** $p < .01$; *** $p < .001$

Table A2
Impact of CAPIT on Spring Reading Achievement Over the Spring Semester

Predictor	Estimate	se	t-value	df	p-value	Confidence Interval
(Intercept)	-14.92	14.56	-1.02	15.887	0.321	[-45.81, 15.97]
Treatment	6.26	5.50	1.14	771.006	0.255	[-4.53, 17.05]
FAST Winter Overall Score	0.60	0.03	20.15	728.782	<.001***	[0.54, 0.65]
Gender	6.24	4.36	1.43	720.355	0.153	[-2.32, 14.8]
IEP Status	-7.08	8.91	-0.79	718.986	0.427	[-24.58, 10.41]
FRL Eligibility Status	-11.72	4.82	-2.43	728.937	0.015 *	[-21.19, -2.26]
Minority Status	9.92	4.97	2.00	740.217	0.046 *	[0.17, 19.67]
Age	24.40	7.45	3.28	719.524	0.001 **	[9.78, 39.01]
Course Number (Intercept)	82.90					
Residual	59.00					

*$p < .05$; ** $p < .01$; *** $p < .001$

Appendix B: FAST Subscale Growth Tables

Table A3
Impact of CAPIT on FAST Alphabetic Principle Subscale Score Over the Full School Year

Predictor	Estimate	Standard Error	t-value	df	p-value	Confidence Interval
Treatment	4.38	1.18	3.72	435.777	<.001***	[2.07, 6.69]
Alphabetic Principle Subdomain Fall Score	0.35	0.03	11.45	656.060	<.001***	[0.29, 0.41]
Gender	1.02	1.02	1.00	648.917	0.317	[-0.98, 3.02]
IEP Status	-3.51	2.08	-1.68	653.168	0.093	[-7.6, 0.59]
FRL Eligibility Status	-2.85	1.13	-2.52	668.293	0.012 *	[-5.06, -0.63]
Minority Status	1.79	1.12	1.60	657.647	0.111	[-0.41, 4]
Age	4.41	1.76	2.51	651.702	0.012 *	[0.96, 7.85]
Course Number (Intercept)	5.17					
Residual	12.80					

*$p < .05$; ** $p < .01$; *** $p < .001$

Table A4
Impact of CAPIT on FAST Concept of Word Subscale Score Over the Full School Year

Predictor	Estimate	Standard Error	t-value	df	p-value	Confidence Interval
Treatment	4.82	1.28	3.75	446.309	<.001***	[2.29, 7.34]
Concept of Word Subdomain Fall Score	0.40	0.03	11.72	655.276	<.001***	[0.33, 0.47]
Gender	1.04	1.11	0.94	648.723	0.349	[-1.14, 3.22]
IEP Status	-3.75	2.27	-1.65	652.916	0.099	[-8.2, 0.71]
FRL Eligibility Status	-3.25	1.23	-2.64	668.040	0.009 **	[-5.66, -0.83]
Minority Status	2.04	1.23	1.67	659.283	0.096	[-0.36, 4.45]
Age	4.82	1.91	2.52	651.326	0.012 *	[1.07, 8.58]
Course Number (Intercept)	5.76					
Residual	13.93					

*$p < .05$; ** $p < .01$; *** $p < .001$

Table A5
Impact of CAPIT on FAST Phonemic Awareness Subscale Score Over the Full School Year

Predictor	Estimate	Standard Error	t-value	df	p-value	Confidence Interval
Treatment	5.38	1.58	3.42	454.237	0.001 **	[2.29, 8.48]
Phonemic Awareness Subdomain Fall Score	0.66	0.06	12.02	654.342	<.001***	[0.55, 0.77]
Gender	1.07	1.36	0.78	649.148	0.434	[-1.61, 3.74]
IEP Status	-3.97	2.78	-1.43	653.191	0.154	[-9.44, 1.49]
FRL Eligibility Status	-4.45	1.51	-2.94	668.144	0.003 **	[-7.42, -1.48]
Minority Status	2.83	1.50	1.88	660.036	0.06	[-0.12, 5.78]
Age	6.41	2.34	2.74	651.018	0.006 **	[1.82, 11]
Course Number (Intercept)	7.11					
Residual	17.07					

*$p < .05$; ** $p < .01$; *** $p < .001$

Table A6
Impact of CAPIT on FAST Phonics Subdomain Score Over the Full School Year

Predictor	Estimate	Standard Error	t-value	df	p-value	Confidence Interval
Treatment	5.55	1.61	3.44	453.490	0.001 **	[2.38, 8.72]
Phonics Subdomain Fall Score	0.67	0.06	11.94	654.173	<.001***	[0.56, 0.78]
Gender	1.09	1.39	0.78	649.217	0.435	[-1.65, 3.83]
IEP Status	-4.07	2.85	-1.43	653.264	0.154	[-9.66, 1.53]
FRL Eligibility Status	-4.47	1.55	-2.89	668.191	0.004 **	[-7.51, -1.43]
Minority Status	2.86	1.54	1.86	659.900	0.063	[-0.15, 5.88]
Age	6.63	2.39	2.77	650.988	0.006 **	[1.93, 11.33]
Course Number (Intercept)	7.27					
Residual	17.49					

*$p < .05$; ** $p < .01$; *** $p < .001$

Table A7
Impact of CAPIT on FAST Structural Analysis Subdomain Score Over the Full School Year

Predictor	Estimate	Standard Error	t-value	df	p-value	Confidence Interval
Treatment	5.34	1.65	3.23	448.408	0.001 **	[2.1, 8.59]
Structural Analysis Subdomain Fall Score	0.78	0.07	11.66	654.373	<.001***	[0.65, 0.91]
Gender	1.10	1.43	0.77	649.527	0.442	[-1.71, 3.91]
IEP Status	-4.03	2.92	-1.38	653.526	0.169	[-9.76, 1.71]
FRL Eligibility Status	-4.58	1.59	-2.88	668.444	0.004 **	[-7.7, -1.46]
Minority Status	3.02	1.57	1.91	658.935	0.056	[-0.08, 6.11]
Age	7.03	2.45	2.87	651.130	0.004 **	[2.23, 11.84]
Course Number (Intercept)	7.35					
Residual	17.94					

*$p < .05$; ** $p < .01$; *** $p < .001$

Table A8
Impact of CAPIT on FAST Vocabulary Subdomain Score Over the Full School Year

Predictor	Estimate	Standard Error	t-value	df	p-value	Confidence Interval
Treatment	5.34	1.56	3.42	458.175	0.001 **	[2.28, 8.41]
Vocabulary Subdomain Fall Score	0.65	0.05	12.06	654.255	<.001***	[0.55, 0.76]
Gender	1.07	1.35	0.79	649.005	0.427	[-1.57, 3.71]
IEP Status	-4.07	2.75	-1.48	653.020	0.139	[-9.47, 1.33]
FRL Eligibility Status	-4.31	1.50	-2.88	667.994	0.004 **	[-7.24, -1.37]
Minority Status	2.72	1.49	1.83	660.628	0.067	[-0.19, 5.64]
Age	6.32	2.31	2.73	650.893	0.006 **	[1.78, 10.86]
Course Number (Intercept)	7.10					
Residual	16.88					

*$p < .05$; ** $p < .01$; *** $p < .001$

Table A9
Impact of CAPIT on FAST Visual Discrimination Subdomain Score Over the Full School Year

Predictor	Estimate	Standard Error	t-value	df	p-value	Confidence Interval
Treatment	4.29	1.14	3.76	433.853	<.001***	[2.05, 6.53]
Visual Discrimination Subdomain Fall Score	0.33	0.03	11.38	655.898	<.001***	[0.27, 0.39]
Gender	1.03	0.99	1.04	648.706	0.298	[-0.91, 2.97]
IEP Status	-3.32	2.02	-1.64	653.004	0.101	[-7.29, 0.65]
FRL Eligibility Status	-2.70	1.09	-2.46	668.275	0.014 *	[-4.84, -0.55]
Minority Status	1.70	1.09	1.56	657.472	0.12	[-0.44, 3.84]
Age	4.20	1.70	2.47	651.605	0.014 *	[0.86, 7.55]
Course Number (Intercept)	5.01					
Residual	12.41					

*$p < .05$; ** $p < .01$; *** $p < .001$

Table A10
Impact of CAPIT on FAST Sentence-Level Comprehension Subdomain Score Over the Full School Year

Predictor	Estimate	Standard Error	t-value	df	p-value	Confidence Interval
Treatment	5.65	1.71	3.30	449.720	0.001 **	[2.29, 9.01]
Sentence-Level Comprehension Subdomain Fall Score	0.76	0.06	11.70	654.082	<.001***	[0.63, 0.88]
Gender	1.03	1.48	0.70	649.368	0.485	[-1.87, 3.93]
IEP Status	-4.21	3.02	-1.39	653.382	0.164	[-10.14, 1.73]
FRL Eligibility Status	-4.79	1.64	-2.91	668.386	0.004 **	[-8.01, -1.56]
Minority Status	3.14	1.63	1.93	659.221	0.054	[-0.05, 6.34]
Age	7.32	2.53	2.89	650.908	0.004 **	[2.35, 12.29]
Course Number (Intercept)	7.64					
Residual	18.55					

*$p < .05$; ** $p < .01$; *** $p < .001$

Table A11

Impact of CAPIT on FAST Paragraph-Level Comprehension Subdomain Score Over the Full School Year

Predictor	Estimate	Standard Error	t-value	df	p-value	Confidence Interval
Treatment	4.94	1.56	3.17	446.145	0.002 **	[1.87, 8]
Paragraph-Level Comprehension Subdomain Fall Score	0.84	0.07	11.81	654.197	<.001***	[0.7, 0.98]
Gender	1.04	1.35	0.77	649.594	0.441	[-1.61, 3.69]
IEP Status	-3.60	2.76	-1.30	653.599	0.193	[-9.02, 1.82]
FRL Eligibility Status	-4.30	1.50	-2.86	668.500	0.004 **	[-7.25, -1.35]
Minority Status	2.84	1.49	1.91	658.625	0.057	[-0.08, 5.76]
Age	6.62	2.31	2.86	651.113	0.004 **	[2.08, 11.15]
Course Number (Intercept)	6.91					
Residual	16.94					

*$p < .05$; ** $p < .01$; *** $p < .001$

An Evaluation of the CAPIT Reading Curriculum in California and Florida

Teacher Survey Results Summary

September 2024

JOHNS HOPKINS
SCHOOL of EDUCATION

Center for Research and Reform in Education

Contents

Introduction and Background 

The present report summarizes the results of a mixed-methods survey given to teachers utilizing the CAPIT Reading Curriculum in elementary schools across two separate school districts – the Lake Elsinore Unified School District (LEUSD) in California, and the Orange County Public School District (OCPS) in Florida. This survey was administered as part of Johns Hopkins University's (JHU) ongoing evaluation research examining the impact of the CAPIT Reading Curriculum on student reading development and early literacy outcomes with prekindergarten and elementary school-aged students. Administered separately to teachers as part of concurrent evaluations conducted by JHU in 2023 and 2024 examining the impact of this reading program in elementary school classrooms in LEUSD and prekindergarten classrooms in OCPS, data collected through this survey aimed to comprehensively gather teachers' impressions of CAPIT. Provided in the appendix of this report, this survey employed a combination of Likert-based and open ended items in which teachers shared their impressions of CAPIT after using it over the course of a single school year -- including its effectiveness at enhancing reading engagement and literacy development in students, the utility of different program components, and overall areas of strength and weakness. As such, findings from these surveys represent much of what is currently known in the K-12 literacy field concerning teachers' impressions of the effectiveness of this reading curriculum and overall pedagogical approach relative to other early literacy programs. Situated within the wider array of research that has been conducted on CAPIT Reading to date, including that produced by JHU as part of these broader ongoing evaluations in OCPS and LEUSD (see Reilly & Storey, 2023; 2024), these combined survey findings are presented with the explicit goal of informing CAPIT program developers, as well as potential program adopters, of teachers' current impressions of this curriculum after having employed it as a supplemental literacy program within their respective districts.

This report summarizes the findings of these survey activities and aims to provide an overview of the qualitative results obtained to date as part of JHU's broader evaluation of the CAPIT program, particularly that which is currently underway in Orange County Public Schools.

Method

As outlined, the present report summarizes the findings gathered from a mixed-methods teacher survey administered to elementary school and prekindergarten teachers employing the CAPIT Reading Curriculum as a supplemental literacy program in their respective classrooms. Presented in the Appendix section of this report, the teacher survey was administered at the close of the 2022-23 school year to CAPIT teachers in LEUSD, and at the close of the 2023-24 school year to CAPIT teachers in OCPS. The survey was co-designed by the JHU research team in conjunction with CAPIT program developers and aimed to employ a combination of Likert-based (i.e., close-ended) and narrative-based (i.e., open-ended) questions to assess teachers' impressions and experiences using CAPIT. In specific, the research questions which this survey aimed to address include:

1) What are teachers' perceptions of the CAPIT Reading Curriculum with regard to:
   a) Benefits for students?
   b) Student engagement?
   c) Implementation requirements?
   d) Strengths and weaknesses?
   e) Recommendations for implementation improvement?

Administered as part of consecutive evaluations conducted by Johns Hopkins University's Center for Research and Reform in Education (JHU CRRE), the first occurring with elementary school teachers in LEUSD during the 2022-23 school year and the second occurring the following school year in OCPS with prekindergarten teachers, findings of this survey provide insights into these specific research areas and collectively demonstrate how teachers employing the program with different age groups of students (prekindergarten and elementary) view the program's utility.

Setting and District Implementation Context

During the respective evaluations' survey administration windows, a total of 75 teachers utilizing CAPIT completed the outlined survey across these two districts. This sample included 62 elementary school teachers using the program in LEUSD and 13 prekindergarten teachers using the program in OCPS.[1] These school district contexts are described briefly below.

Lake Elsinore Unified School District. Located in Southwest Riverside County in Southern California, Lake Elsinore USD encompasses a total of 23 schools, 16 of which serve students at the elementary level. Total enrollment is approximately 21,500 students. The predominant student ethnic group is Hispanic, with 80% total minority representation, and 45% classified as economically disadvantaged.

Orange County Public Schools. Located in Central Florida, and encompassing both Orlando and its surrounding metropolitan area, OCPS serves roughly 205,000 students, nearly

[1] In LEUSD, this survey respondent sample (N = 62) was out of roughly 165 teachers who received CAPIT user licenses to employ the program in the district. In OCPS, this sample (N = 13) was out of roughly 20 prekindergarten teachers who received licenses to use the program.

80,000 of which are at the elementary level. Across the district's 131 elementary schools, roughly 62% of students are White, 28% are African American, and 45% identify as Hispanic. Across the district, about 42% of students are classified as economically disadvantaged.

Participants

Across the respective LEUSD and OCPS evaluations, the survey was administered virtually to CAPIT teachers at the close of the school year via the Qualtrics online survey platform. All elementary school teachers utilizing CAPIT in LEUSD and all prekindergarten teachers using CAPIT in OCPS were invited to complete the survey during this administration window. CAPIT LEUSD and OCPS district liaisons distributed links to complete the survey in conjunction with the JHU CRRE research team to these participant groups. In LEUSD, of the ~165 *elementary* teachers in the total CAPIT teaching pool, 62 completed the survey in the specified administration window. In OCPS, of the ~20 *prekindergarten* teachers in the CAPIT teaching pool, 13 completed the survey in the specified window. An overview of the characteristics of this participant sample, in terms of grade level taught, years of teaching experience, and implementation practices with CAPIT, is provided in Table 1.

Table 1
Teacher Survey: Demographic Characteristics

	LEUSD	*OCPS*
Grade Level Taught[2]		
Pre-K	4.8%	100.0%
Kindergarten	27.4%	-
1st	24.2%	-
2nd	30.7%	-
3rd	25.8%	-
4th	8.1%	-
5th	6.5%	-
Years Experience Teaching		
1st Year Teacher	0.0%	0.0%
1-2 Years	4.9%	0.0%
3-5 Years	9.8%	0.0%
6-10 Years	16.4%	16.7%
11+ Years	68.9%	83.3%
Class Size		
Less than 10 students	1.6%	0.0%
11-15 students	8.2%	0.0%
16-20 students	29.5%	91.7%
21-25 students	54.1%	0.0%
26-30 students	6.6%	0.0%
31+ students	0.0%	8.3%
Duration of CAPIT Use		
I used CAPIT during the first half of the year only	9.8%	0.0%
I used CAPIT during the second half of the year only	31.1%	0.0%
I used CAPIT throughout the entire school year	42.6%	25.0%
I have used CAPIT for multiple school years	16.4%	75.0%

Note. Sample size of 62 respondents in LEUSD. Sample size of 13 respondents in OCPS. Total sample of 75 respondents.

[2] Participants were prompted to select all the grade levels in which they currently teach. As such, teachers working across multiple grades made multiple selections.

Results

The following section summarizes teachers' overall perceptions of CAPIT as expressed through the outlined end-of-year survey. Findings related to teachers' responses to Likert-based items are provided first, which are then followed by summaries of findings generated from teachers' narrative responses to the survey's open-ended questions. Conclusions and a discussion of these findings are provided in the subsequent section.

Overall Teacher Perceptions and Ratings

Teacher Training and Program Use. To begin the teacher survey, participants were asked a series of questions concerning the types of training they engaged in with regard to CAPIT, as well as the nuances with regard to how often and in what ways they utilized the program with their students during the school year. Patterns of teacher responses for these items are shown in Table 2 below.

Table 2
Teacher Survey: Teacher Training and Program Use

	LEUSD	*OCPS*	*Overall*
Ways CAPIT was used in Classroom[3]			
Teacher-led Whole Group Instruction	11.3%	69.2%	21.3%
Teacher-led Small Group Instruction	4.8%	38.5%	10.7%
Independent Student Work	30.6%	69.2%	37.3%
Center-based Work	33.9%	53.8%	37.3%
Homework	1.6%	15.4%	4.0%
Other	16.1%	0.0%	13.3%
I was able to use CAPIT for 15-20 minutes per day (on average)			
Yes	73.3%	41.7%	68.1%
Somewhat	23.3%	58.3%	29.2%
No	3.3%	0.0%	2.8%
How much instructional time was spent on CAPIT per day?			
Less than 10 minutes	-	25.0%	-
10-20 minutes	-	66.7%	-
Less than 20 minutes	60.7%	-	54.4%
20-30 minutes	39.3%	8.3%	44.1%
31-45 minutes	0.0%	-	1.5%
More than 45 minutes	0.0%	-	0.0%
How many days per week did you implement CAPIT?			

[3] Participants were prompted to select all the ways in which they employed CAPIT in their classrooms. As such, teachers utilizing the program through multiple methods made multiple selections for this item.

1 day	3.6%	0.0%	2.9%
2 days	7.1%	0.0%	5.9%
3 days	10.9%	16.7%	11.8%
4 days	37.5%	41.7%	38.2%
5 days	41.1%	41.7%	41.2%
Which CAPIT PD/Training did you receive?[4]			
Traditional 90-minute online training	62.9%	61.5%	62.6%
The 2-day comprehensive PD	33.9%	-	-
The 3-week virtual comprehensive PD	27.4%	-	-
The traditional 60-minute live virtual PD	30.6%	38.5%	32.0%
Additional customized PD during your PLC	4.8%	-	-

As summarized above, CAPIT was used in various ways by teachers in the classroom, and methods appeared to differ somewhat between elementary teachers (i.e., those in LEUSD) and pre-k teachers (i.e., those in OCPS). At the prekindergarten level, teachers most commonly used the program as part of teacher-led whole group instruction or as part of independent student work. At the elementary level, teachers most commonly employed the program as part of center-based work or independent work. Across both the elementary and prekindergarten participant groups, roughly 80% of teachers reported using the program four or five days per week, though slight variation did occur with regard to how many minutes participants used the program each day between the grade spans.

Impressions of Teacher Training and Professional Development. As summarized in Table 3, teachers in both LEUSD and OCPS provided their impressions with regard to the quality and utility of both the initial onboarding PD they received, as well as the ongoing training and support that was provided to them through CAPIT during the school year.

Table 3
Overall Perceptions of Teacher Training and Professional Development

Rate your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The initial training I received prepared me to effectively teach CAPIT in my classroom					
LEUSD	4.9%	8.2%	14.8%	52.5%	19.7%
OCPS	16.7%	0.0%	8.3%	25.0%	50.0%
Overall	6.8%	6.8%	13.7%	47.9%	24.7%
The PD offered through CAPIT enhanced my ability to teach reading					
LEUSD	1.8%	10.7%	32.1%	42.9%	12.5%
OCPS	0.0%	0.0%	25.0%	33.3%	41.7%
Overall	1.5%	8.8%	30.9%	41.2%	17.6%

[4] Participants were directed to select more than one option if applicable (i.e., teachers may have attended multiple types of PD/training).

In both districts, teachers reported generally positive perceptions of the CAPIT teacher training and professional development. In the case of elementary teachers (i.e., those in LEUSD) and pre-k teachers (i.e., those in OCPS) alike, the majority of participants indicated that they felt that the initial training they received on the program prepared them to effectively deliver CAPIT in their classroom. Across the whole participant sample, just under 75% of participants indicated that they felt prepared to deliver the program after this training. Impressions were generally positive, though somewhat split, however, between elementary and pre-k teachers with regard to the extent to which the PD offered through CAPIT enhanced their ability to effectively teach reading in their respective grades. While about 75% of pre-k teachers expressed that they felt that this was the case, a little over half of elementary teachers reported as such.

Impressions of Student Engagement. In both districts, teachers were asked to provide their impressions with regard to students' use of the program and the program's impact on student engagement (see Table 4).

Table 4
Overall Perceptions of Student Engagement Outcomes

Rate your level of agreement with each of the following statements.					
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
My students had adequate time each week to use the program and met the recommended usage					
LEUSD	5.0%	13.3%	8.3%	48.3%	25.0%
OCPS	0.0%	8.3%	0.0%	50.0%	41.7%
Overall	4.2%	12.5%	6.9%	48.6%	27.8%
My students gave their best effort when using CAPIT					
LEUSD	1.7%	8.3%	23.3%	48.3%	18.3%
OCPS	0.0%	0.0%	8.3%	75.0%	16.7%
Overall	1.4%	6.9%	20.8%	52.8%	18.1%
Most of my students seemed engaged during CAPIT lessons and activities					
LEUSD	1.7%	5.0%	15.0%	58.3%	20.0%
OCPS	0.0%	0.0%	8.3%	58.3%	33.3%
Overall	1.4%	4.2%	13.9%	58.3%	22.2%

Teachers' perceptions of student engagement across these items were largely positive. Across the entire participant pool, over 75% percent of teachers agreed or strongly agreed that students had adequate time to use the program and met recommended usage levels each week, while just over 80% felt that most of their students seemed engaged during CAPIT lessons and activities. About 70% of teachers also expressed the belief that their students gave their best effort when using CAPIT.

In terms of comparing the responses between elementary teachers and pre-k teachers on these items, though participants in both these grade spans provided largely positive responses, a slightly greater proportion of pre-k teachers demonstrated agreement relative to those at the elementary level. This trend was evident in the proportion of teachers who reported having adequate time each week to use the program (pre-k = 91.7%; elementary = 73.3%); the proportion who felt their students gave their best effort while participating in the program (pre-k = 91.7%; elementary = 66.7%); and the proportion who reported that students were engaged while using the program (pre-k = 91.7%; elementary = 78.3%).

Impressions of Program Impacts on Phonics Indicators. As summarized in Table 5, teachers provided their impressions with regard to the impact the program may be fostering on students' reading development, with a particular focus on phonics learning.

Table 5
Overall Perceptions of Program Impact on Reading Development: Phonics Indicators

Rate your level of agreement with each of the following statements.

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
CAPIT improved students' alphabetic knowledge						
	LEUSD	0.0%	0.0%	12.5%	46.4%	41.1%
	OCPS	0.0%	0.0%	8.3%	33.3%	58.3%
	Overall	0.0%	0.0%	11.8%	44.1%	44.1%
CAPIT improved students' phonemic awareness						
	LEUSD	0.0%	3.6%	14.3%	37.5%	44.6%
	OCPS	0.0%	0.0%	8.3%	25.0%	66.7%
	Overall	0.0%	2.9%	13.2%	35.3%	48.5%
CAPIT improved students' phonics skills						
	LEUSD	0.0%	1.8%	14.3%	39.3%	44.6%
	OCPS	0.0%	0.0%	8.3%	25.0%	66.7%
	Overall	0.0%	1.5%	13.2%	36.8%	48.5%

Across the participant pool, both elementary and pre-k teachers expressed highly positive perceptions of the impact CAPIT is having on student phonics development. Just under 90% of teachers agreed or strongly agreed that CAPIT improved their students' alphabetic knowledge, while roughly 85% reported improvements in phonemic awareness and phonics skills. As with what was found with regards to the survey's student engagement items, pre-k teachers reported slightly greater agreement across the areas above as well. While pre-k teachers offered similar impressions to those of elementary teachers with regard to the program's impact on their students' development of alphabetic knowledge (pre-k = 91.7% agreed; elementary = 87.5% agreed), a greater proportion of pre-k teachers reported improvements with students' phonemic awareness (pre-k = 91.7%; elementary = 82.1%) and phonics skills (pre-k = 91.7%; elementary = 83.9%).

Overall Program Impressions. Similarly, teachers were asked a series of questions concerning their overall perceptions of the impact of CAPIT on student reading development, including decoding and reading fluency skills, as well as their opinions on whether they would use CAPIT again during the next school year. Patterns of teacher responses for these items are shown in Table 6 below.

Table 6
Overall Perceptions of Program Impact on Reading Development: General Skills

Rate your level of agreement with each of the following statements.

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
CAPIT improved students' decoding skills						
	LEUSD	0.0%	1.8%	21.4%	41.1%	35.7%
	OCPS	0.0%	0.0%	16.7%	33.3%	50.0%
	Overall	0.0%	1.5%	20.6%	39.7%	38.2%
CAPIT improved students' sight word recognition						
	LEUSD	0.0%	12.5%	39.3%	30.4%	17.9%
	OCPS	8.3%	8.3%	33.3%	8.3%	41.7%
	Overall	1.5%	11.8%	38.2%	26.5%	22.1%
CAPIT improved students' reading fluency						
	LEUSD	0.0%	5.4%	41.1%	39.3%	14.3%
	OCPS	0.0%	0.0%	50.0%	16.7%	33.3%
	Overall	0.0%	4.4%	42.6%	35.3%	17.6%
CAPIT improved students' enjoyment of reading						
	LEUSD	0.0%	7.1%	41.1%	39.3%	12.5%
	OCPS	0.0%	0.0%	25.0%	33.3%	41.7%
	Overall	0.0%	5.9%	38.2%	38.2%	17.6%
I would like to use CAPIT again next year						
	LEUSD	1.8%	5.4%	5.4%	33.9%	53.6%
	OCPSD	0.0%	0.0%	8.3%	25.0%	66.7%
	Overall	1.5%	4.4%	5.9%	32.4%	55.9%

As it relates to these literacy areas, just under 80% teachers reported that they believed program improved students decoding skills, while about half of teachers indicated that they felt the program also had a positive impact on students' sight word recognition as well as their overall reading fluency. Just over half of teachers indicated that they felt the program had also improved students' enjoyment of reading – a trend that was particularly visible across the responses of pre-k teachers (where 75.0% of participants reported that this was the case). Overwhelming, the vast majority of participants (roughly 90%) reported that they would like to continue using CAPIT with their students in the future.

Best Liked Features and Program Strengths

In terms of best-liked features and key "successes" with regard to using the CAPIT Curriculum, teachers shared narrative responses on the survey which coalesced around several themes. About one-quarter of the teacher survey respondents across both districts explicitly indicated that they were impressed by, and also found substantial benefit in, the overall instructional approach that CAPIT takes with regard to teaching phonics. As described by CAPIT, the program utilizes a systematic sound-to-print orientation to teaching phonics in which the English language is made more logical and decodable (CAPIT, 2023)[5]. At the elementary level, a similar proportion of respondents (roughly one-quarter) explicitly highlighted elements of CAPIT's mastery-based approach to helping students progressively develop phonics skills in a way that is both highly targeted and addresses skill gaps in learners. In specific, providing opportunities for students to engage in structured, targeted reading practice was viewed as a key strength of the program by many. At the pre-k level, about one-quarter of teachers also highlighted the explicit way that the program focuses on sounds as a best liked feature – with the use of mnemonics and pictures being viewed by participants as being particularly beneficial with this age range. Pre-k teachers also noted that they enjoyed the program's whole group/small group/independent tablet time model, and some expressed that they found the program particularly effective for students new to learning English (ELLs).

In addition to these positive impressions of the program's pedagogical design, participants were just as frequently apt to highlight the program's impact on student engagement with reading as a key strength of CAPIT. In fact, benefits related to the program's impact on student engagement and/or student confidence with reading, as well as the program's ease of use for both teachers and students were collectively cited by close to half of all respondents as key program strengths by teachers at the elementary and pre-k levels alike.

Other program nuances and features were also highlighted by participants, albeit at a less substantial frequency. Most notably, the program's "visuals and songs," as well as select interactive features in the student-facing materials, were highlighted by roughly 10-15% of respondents as program strengths. Here, teachers specifically praised the "Alphabet song" the "CAPIT song," the CAPIT Sound Wall, and the visual cues embedded in the program aimed at enhancing students' phonemic awareness. Other program strengths shared by individual respondents included the way that the program "fits with morning routines," the overall layout of the CAPIT digital interface, and the way that the program provides for whole group teaching opportunities as well as opportunities for review. Select narrative quotes from survey participants describing program strengths are provided below[6]:

> "I like that CAPIT immensely helped my low- to mid-readers. And it helped me identify the phonemic awareness gaps in my higher readers. Before, CAPIT I would've never had thought my highest readers had gaps." – *Elementary School*

[5] For further information, please visit https://capitlearning.com/capit-method

[6] For purposes of narrative clarity, as appropriate, select participant quotes have been lightly adapted for formatting, grammar, and syntax.

Teacher

"My students were deeply engaged and they loved how we kept track. The students were proud of their growth."
– *Elementary School Teacher*

"The kids are really engaged. They love the visuals and the songs. I love that it is targeted practice that helps the students with their own level of phonics and phonemic awareness."
– *Elementary School Teacher*

"Students are engaged. They're excited to learn and progress. They're excited for their friends when they complete lessons. But most importantly, they're learning their sounds and putting them to use quickly. It meets every students' needs and challenges everyone -- everyone is working on their own level at their own pace."
– *Elementary School Teacher*

"I LOVE THE PHILOSOPHY BEHIND HOW KIDS LEARN." – *Elementary School Teacher*

"What I most like about CAPIT is its structure and organization. The students are able to see, at a glance, where they are on their reading journey, where they are headed, and how much more there is to go before they reach their target goal."
– *Elementary School Teacher*

"It teaches the student phonemic awareness in a fun way. They enjoy playing it and they also love the alphabet song! It keeps advancing, challenging them with different levels." – *PreK Teacher*

"I feel it is an effective program for ELLs." – *PreK Teacher*

"I love the picture-sound connections my students make." – *PreK Teacher*

"I liked the whole group, small group, independent tablet time model." – *PreK Teacher*

"I like how it focuses mainly on sounds." – *PreK Teacher*

"Students had consistent letter/sound recognition on a daily basis." – *PreK Teacher*

"I like that CAPIT is like a 'game' on the iPad - this helps with student engagement. I really like the program and for the most part my students really like the program as well." – *PreK Teacher*

"Everything :)" – *PreK Teacher*

> "CAPIT reinforces students' ability to recognize the letters, letter sounds, and sight words. Students use mnemonics to help remember letters and letter sounds. Lessons are strategically designed with pictures or word with the meaning, attributes, or associated information." – *PreK Teacher*

Challenges and Recommendations

Next, teachers were prompted on the survey to describe any challenges they had with successfully implementing the program and to highlight any features or aspects of CAPIT that they felt could be improved. At the elementary level, the most common challenge highlighted by teachers dealt with experiencing some difficulty with understanding select words and sounds that the program's audio component produced. Glitches with hearing certain sounds clearly, particularly those related to certain vowel sounds, appeared to be an issue experienced sporadically by students, and appeared to occur both in cases where students were wearing headphones, and when they were not. Issues of this type were highlighted by about one-quarter of all survey respondents. Other issues related to more general technical glitches were reported occasionally by about 10% of respondents. At the pre-k level, the most common challenge cited by teachers dealt with navigating some of the instructional progressions employed by the program given the very young age of their students. Though teachers with this age cohort noted several different suggestions in this area, most coalesced around providing additional reteaching and review activities for students before they engage in more challenging lessons (such as those tackling three-phoneme words), and providing more resources that directly address and teach *letter names* and not only letter sounds. As summarized by several pre-k teachers:

> "When my PreK student(s) passed level one, it went too quickly into three-phoneme words. I think having a bit more time with two-phonemes would be helpful."
> – *PreK Teacher*

> "When a child cannot pass the review activities, it does not send them back to practice the letters they are missing. It just leaves them stuck on that until they get it right. If you are not sitting right there with them, they get frustrated."
> – *PreK Teacher*

> "I understand Montessori philosophy with young students, but I also think it is extremely important for students to learn the letter names as well as the sounds."
> – *PreK Teacher*

> "When students move from level 1 to level 2 they are all of a sudden spelling words, and often times, even with small group instruction…they struggle immensely hearing the individual sounds. It seems like CAPIT could easily be able to amend this issue with a few more lessons/games stressing the identification of sounds in each word (something like Elkonin boxes or similar) to stress the *beginning, middle*, and *ending* sounds of words." – *PreK Teacher*

> "On the review lessons, it would be nice if after one or two failed attempts, (the program would) send them back to the letters that they are struggling with."
> – *PreK Teacher*

Outside of these areas, finding enough instructional time to use the program sufficiently was the next most frequently cited challenge by participants at both the elementary level and pre-k level alike. At the elementary level, recommended program usage by CAPIT is an average of 25-35 minutes each day of the instructional week (this includes 10-15 minutes of teacher-led instruction, along with 15-20 minutes of student practice). Though about 75% of teachers indicated that they were able to attain this usage level, and nearly all indicated that they were at least *somewhat* able to address this threshold, teachers expressed that it could be challenging structuring their instructional schedule in a way that allowed for this level of usage. Relatively few teachers (around 10%), however, explicitly stated that they found the program's design to be time-intensive to implement. Several elementary teachers also noted that the design of the program's mastery-based approach to phonics instruction could pose challenges in select situations. Here, several teachers indicated that having more scaffolds and supports to help students "when they get stuck" would be beneficial. Others noted that the length of the placement test makes it difficult to move students ahead in the middle of the year, and that having the ability to place students "back to level one" when they need more time would be helpful as well.

Other challenges were sporadically cited by a small number of teachers. A few elementary teachers noted that they found the program to be more beneficial for younger students and/or for students who were struggling, as opposed to older students or those in younger grades who may already have more advanced phonics skills. Logistical issues related to the availability of one-to-one computers and iPads, and issues related to supervising young students, particularly those at the pre-k level, as they worked independently with the program were also cited by a small number of teachers. Challenges with long-term planning and feedback related to specific features of the program's scope and sequence (e.g., "level two seemed too long," "too much time is spent on CVC work practice") were highlighted by a small number of teachers as well.

Relative to these areas, participants were also asked what (if any) suggestions they had for the program moving forward. At the elementary level, participants most commonly highlighted that they would like to see CAPIT produce curricular materials for students in the upper elementary grades. Close to one-quarter of elementary school teachers who provided suggestions explicitly indicated that they think that expanding into the upper elementary grades would be highly valuable for students. Also commonly, these teachers suggested adding additional training, professional development, and "offline resources" and also suggested ways that the trainings could be made more "hands-on" for teachers. Other suggestions made by a small number of participants largely centered on addressing specific challenges related to technical glitches (see above) or with making slight adjustments to the program's dashboard and/or specific materials. These included:

> "In CAPIT level three, I'm wondering if short passages/text could be added that include the sound they learned. For example, if they were learning the sound "ore" (the passages that follow could) incorporate sentences that had mostly words with "ore" so that students can see the transition and practice it in reading text and not isolated words."

– *Elementary School Teacher*

"(I) wish the Teacher Dashboard was more user-friendly and that the reports would show areas students struggle on vs. a "pass"—like how many attempts they are needing to do before they pass a skill. I appreciate that it says "Below Average" on the report, but how do they need to improve? What area? What skill?"
– *Elementary School Teacher*

"I would say during training, show us more (examples of) how it looks in the classroom. Give us more time to talk to same-grade teachers and allow us to plan (the) best way to implement it." – *Elementary School Teacher*

"Allowing teachers to move students back a level, especially after summer break when there has been some learning loss. I didn't notice any improvement with the writing letter component. Students spend too much time painting letter pictures and become distracted with this piece.'
– *Elementary School Teacher*

"It would be nice if it was modified for older kids who are actually at Level 1. I realize this program was made for early primary, but it would be nice if there was an upper primary option that was a little more 'exciting' for the big kids"
– *Elementary School Teacher*

"A follow-up training to the comprehensive training is needed to clarify any issues that implementing teachers might have. The creators of CAPIT are very responsive and are quick to give feedback; however, the task of teaching reading through their methods would have been far more productive had my grade level team had the opportunity to collaborate and ask questions." – *Elementary School Teacher*

At the pre-k level, suggestions made by teachers oriented mostly around providing additional scaffolds and instructional resources aimed at assisting struggling students, and creating additional procedures for students to review and practice concepts in instances where they may be having difficulty. Providing additional resources that more explicitly teach letter names as well as building scaffolds and additional lesson options addressing select instances in the instructional sequence, particularly when concepts need to be reviewed and when more challenging concepts are being introduced, are also highlighted by this group.

"At first it's confusing. For example; 'butterfly for wings'…once you get used to it the students understand and learn." – *PreK Teacher*

"I have also noticed that when some students get very far into the program - (around lesson 80) they start to make two and three word phrases again. I feel there needs to be more explanation of this concept - more games or ways to practice this within the lessons." – *PreK Teacher*

"I wish there was a way to reset the lessons for a student so he/she could go through the letter sounds knowledge in level one a second time. I have one student who routinely had help from others and got to level two fairly easily but didn't have the knowledge necessary to make/spell the words and pass the lessons, and that can be VERY frustrating and discouraging to young students." – *PreK Teacher*

"Having students repeat the same lesson when they did not accomplish their goal." – *PreK Teacher*

"I really enjoy implementing CAPIT, I do see the difference in my students. The only recommendation will be a way to stop the students going back to the 'easy' part instead of going forward. For example, if the student mastered a lesson, have it stored in another place so the student can't see it directly and (will) keep moving on instead of going back to the letter/sound" – *PreK Teacher*

"Making some of the tests shorter or more of a learning activity; and (having) the students immediately get placed on the letter they got wrong. I would also begin with upper case and then move to lower case (letters)." – *PreK Teacher*

"My recommendations are:
1. Use the letter *names* and letter sounds
2. (Provide) more explanation of and identifying the number of sounds in words between level 1 and 2
3. (Provide) more explanation about the number of words in a phrase or sentence
4. (Provide) the ability to reset a student's progress if it is really necessary" – *PreK Teacher*

"Perhaps providing an alternate learning lesson when the child is completing a repeated lesson. It may motivate them to happily do it again. Furthermore, adding some fun animated characters or funny voices can make learning fun." – *PreK Teacher*

Perceptions of Unique Features and Aspects of CAPIT

Lastly, teacher survey respondents were also asked to describe how, if at all, they found CAPIT to be similar or different to other instructional programs they have used for reading. Though a small number of teachers at the elementary level highlighted specific programs that they found portions of CAPIT to be similar to, including *Zoophonics, IMSE*, and *Orton Gillingham* programs, the vast majority of respondents indicated that CAPIT offers an approach that they find largely unique in the developmental literacy space. Most frequently, teachers highlighted that the method used by the program to teach sounds and phonemes differs from others that they use – which was viewed by teachers as a key strength of the program. Many other teachers, particularly those at the pre-k level highlighted the usability, simplicity, and accessibility of the program as a characteristic that they felt made it stand apart. Multiple teachers also explicitly highlighted the program's step-by-step progression of teaching literacy skills as a unique feature, which many found to be an advantageous approach that led to better-targeted instruction.

In addition to the uniqueness of these key program components, numerous teachers at the elementary level also expressed on this item that they found that the program was unique in the impact it was having on students' literacy development and overall engagement with learning to read. Select narrative quotes from survey participants describing the program's unique features are provided below:

> "I loved how students ACTUALLY learned. CAPIT made it possible for the students to understand the alphabet and the English Language."
> – *Elementary School Teacher*

> "The CAPIT program doesn't assign one specific sound per letter (as is the traditional way). With the CAPIT program, kids are trained to recognize the multiple sounds each letter can make." – *Elementary School Teacher*

> "CAPIT is very different than other programs. It is much simpler and user-friendly." – *Elementary School Teacher*

> "CAPIT's main difference is the structure of instruction of phonics. CAPIT's approach requires students to spell the sounds they hear, not say the sound each letter makes."
> – *Elementary School Teacher*

> "*Letters don't make sounds* is a completely new concept. Also, this program allows you to be able to focus on 'less is more,' while most reading programs have tons of stuff to focus on."
> – *Elementary School Teacher*

> "It is different because it gives the students a lot of ways to remember the content. The kids love singing songs and drawing over the letters. It is similar to other programs in that the students can work at their own pace." – *Elementary School Teacher*

> "I have noticed more of an increase in alphabet knowledge, phonemic awareness, phonics, decoding, and segmenting abilities than in other programs."
> – *Elementary School Teacher*

> "CAPIT is taught sound to print. It is different from traditional print to sound."
> – *Elementary School Teacher*

> "It's not really a game; it's real word work!" – *Elementary School Teacher*

> "It works well for new readers and students who are learning English."
> – *Elementary School Teacher*

> "The kids loved it. Every single day they looked forward to their CAPIT time."

– *Elementary School Teacher*

"CAPIT is different from other reading programs in that it is very structured and organized in a way that the skill of reading becomes a finite task rather than being an infinite jumble of unorganized skills to be acquired. Students feel empowered to read because of this."
– *Elementary School Teacher*

"I think it's simple (and) easy for pre-k students to explore and work independently." – *PreK Teacher*

"I liked that the teacher had a place to logon and model the lesson as well as the check points." – *PreK Teacher*

"It is very kid friendly and focuses mainly on sounds." – *PreK Teacher*

"It is similar (to other programs we've used) in that it teaches letter sounds and letter recognition. The rewards/stars are sought after (by students)…. I liked that." – *PreK Teacher*

"CAPIT is different from many programs - I like that there are many lessons and the same program for multiple years." – *PreK Teacher*

"We have absolutely loved how interactive CAPIT is for whole group and independent work." – *PreK Teacher*

"It's very straightforward teaching and learning. I like it when it repeats so students can easily recognize the letters or letter sounds." – *PreK Teacher*

Summary and Conclusion

This report summarizes elementary school and pre-k teachers' perceptions of the CAPIT Reading Curriculum after implementing it as a supplemental phonics program for roughly one school year. As implemented by these teachers across two separate school districts, Lake Elsinore Unified School District (California) and Orange County Public Schools (Florida), the results derived from these combined results situate as part of Johns Hopkins University's ongoing evaluation efforts of the CAPIT Reading Curriculum and serve to inform both CAPIT program developers, as well as potential program adopters, of the unique aspects of this program as offered by teachers who have used it.

Based on results obtained through the outlined surveys, CAPIT appears to be very well-received by elementary teachers and pre-k teachers alike. Teachers at both grade spans expressed, routinely and enthusiastically, that they found the program to be a useful phonics supplement and that they believed the program is having a positive impact on students' literacy development and overall learning. The vast majority of teachers at both grade spans expressed that their students found CAPIT lessons and activities to be engaging, and also highlighted a variety of key areas of literacy development where they perceive the program is having a positive impact. Close to 90% of program users expressed that they felt the program had improved students' alphabetic knowledge and roughly 85% identified improvements in phonemic awareness and overall phonics skills as well.

In discussing the program's best-liked features, teachers regularly highlighted the program's unique instructional approach to teaching phonics – one which adopts a systematic sound-to-print orientation to reading instruction, while leveraging a mastery-based approach to student phonics practice. In making suggestions for program refinements or changes, teachers most prominently made light recommendations with regard to addressing sporadic technical glitches related to the program's auditory functions. Nearly unanimously, elementary and pre-k teachers alike indicated that they would like to use the program again with their students in subsequent school years.

Taken in combination, these findings are suggestive of the promising role CAPIT Reading may have in influencing the learning and achievement of students in these districts, as well as burgeoning readers at the elementary and pre-k levels more broadly. When situated in the context of promising elementary achievement trends demonstrated in LEUSD (see Reilly & Storey, 2024), as well as those within upcoming analyses of pre-k achievement trends in OCPS, these findings are indeed suggestive of the potential CAPIT Reading may have on the literacy development of young readers.

Appendix: Teacher Survey

CAPIT Evaluation - Teacher Survey

Start of Block: Default Question Block

JHU CRRE – CAPIT Reading Curriculum Evaluation

Q22 Name

_____

Q2 What is the name of the school where you teach?

_____

Q3 In what grade(s) do you currently teach?

- ☐ Pre-K (1)
- ☐ K (2)
- ☐ 1st (3)
- ☐ 2nd (4)
- ☐ 3rd (5)
- ☐ 4th (6)
- ☐ 5th (7)

Q4 How many years have you been a teacher?

- Less than 1 (1)
- 1-2 (2)
- 3-5 (3)
- 6-10 (4)
- 11+ (5)

Q5 Approximately how many students are in your classroom?

- Less than 10 (1)
- 11-15 (2)
- 16-20 (3)
- 21-25 (4)
- 26-30 (5)
- 31+ (6)

Q23 Approximately how long did you use CAPIT in your classroom this year?

- I used CAPIT during the first half of the year only (1)
- I used CAPIT during the second half of the year only (2)
- I used CAPIT throughout the entire school year (3)
- I have used CAPIT for multiple school years (4)

Q6 **Teacher Preparation/Training**

Which CAPIT professional development (PD)/training did you receive? Check all that apply.

- ☐ The traditional 90-minute online training (1)
- ☐ The 2-day comprehensive PD (2)
- ☐ The 3-week virtual comprehensive PD (4)
- ☐ The traditional 60-minute live virtual PD (5)
- ☐ Additional customized PD during your PLC (6)

Q7 The initial training I received prepared me to effectively teach CAPIT in my classroom.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q8 How can CAPIT training be improved to better meet teachers' needs?

_____

Q9 I gave my students the opportunity to spend 15-20 minutes daily to work through their CAPIT lessons (per CAPIT recommendations).

- ○ Yes (1)
- ○ Somewhat (2)
- ○ No (3)

Q10 Please indicate your level of agreement with each of the following statements:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
My students had adequate time each week to use the program and met CAPIT recommended usage. (6)	○	○	○	○	○
My students give their best effort when using CAPIT. (7)	○	○	○	○	○
Most of my students seem engaged during CAPIT lessons and activities (8)	○	○	○	○	○

Q11 Do you have suggestions for how student engagement could be improved while using the program?

_____

Q12 How did you use CAPIT in your classroom (Check all that apply)

- ☐ Whole group instruction (1)
- ☐ Teacher led small group instruction (2)
- ☐ Independent work (3)
- ☐ Center based work (4)
- ☐ Homework (5)
- ☐ Other (6) _____

Q13 How much instructional time was spent on CAPIT each day?

- ○ Less than 20 minutes (1)
- ○ 20-30 minutes (2)
- ○ 31-45 minutes (3)
- ○ More than 45 minutes (4)

Q14 Typically, how many days per week did you implement CAPIT in your classroom?

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
CAPIT improved students' alphabet knowledge (1)	○	○	○	○	○
CAPIT improved students' phonemic awareness (2)	○	○	○	○	○
CAPIT improved students' phonics skills (3)	○	○	○	○	○
CAPIT improved students' decoding skills (4)	○	○	○	○	○
CAPIT improved students' sight word recognition (5)	○	○	○	○	○
CAPIT improved students' reading fluency (6)	○	○	○	○	○
CAPIT enhanced students' enjoyment of reading (7)	○	○	○	○	○

The professional development offered by CAPIT enhanced my ability to teach reading (8)	○	○	○	○	○
I would like to use CAPIT again next year (9)	○	○	○	○	○

Q16 What do you like most about CAPIT?

_____

_____

_____

_____

_____

Q17 What do you find the most challenging in implementing CAPIT?

_____

_____

_____

_____

_____

Q24 How is CAPIT different from or similar to other instructional programs you have implemented for reading?

_____

_____

_____

_____

_____

Q18 What recommendations do you have for improving CAPIT?

_____

_____

_____

_____

End of Block: Default Question Block