

Evaluation of Reasoning Mind: Final Report 2015-16

Department of Evaluation and Assessment

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Superintendent of Schools*



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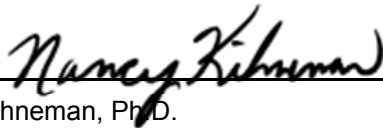
Evaluation of Reasoning Mind: 2015-16 Final Report

Approved Report of the Department of Evaluation and Assessment

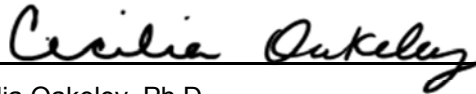
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Evaluation of Reasoning Mind: 2015-16 Final Report

Project Evaluators: Joan Bush, Ph.D. and Myoungsook Kim, Ph.D.

ABSTRACT

2015-16 Reasoning Mind Implementation

In all, 32,889 students in grades two ($n=13,078$), three ($n=12,848$), four ($n=6,152$), and five ($n=811$) used the Reasoning Mind (RM) curriculum. Most were economically disadvantaged (92%) and Hispanic (70%); half were English language learners (ELLs). The 2015-16 RM budget was \$1,925,777.

Implementation fidelity continued to be a concern as a sizeable proportion of campuses were classified as low implementing for second (40%), third (44%), fourth (63%), and fifth (85%) grades; this was especially concerning for fifth grade since RM serves as the full curriculum. Most students (65% to 94%) did *not* meet the hour target, and a sizeable number (45% to 78%) logged less than 80 percent of expected hours. Also, many second (64%) and fifth (58%) graders did *not* meet the accuracy target.

Many first-year teachers (37%) did not complete required training by the end of the first six weeks, which delayed RM use for numerous students. In classroom observations, most teachers used RM as expected; technology issues were observed in 32 percent of second- and third-grade walkthroughs and in 57 percent of fifth-grade observations.

Campus Staff Perceptions of RM

Survey results revealed that teachers continued to be more positive toward RM than campus administrators. Many campus staff members continued to report frequent problems with laptops (35% to 39%) and wireless connectivity (26% to 30%). Major challenges were technology issues and meeting time requirements. Primary suggestions were increasing technology and aligning RM and district curricula.

Mathematics Achievement of RM Students

Like last year, multiple regression analyses showed that RM accuracy, prior achievement, and RM objectives completed were major predictors of spring 2016 assessment scores. Non-RM comparison students in both fourth and fifth grades had slightly higher mathematics STAAR scores than RM students. However, multiple regression results showed that when prior achievement and economically disadvantaged status were accounted for, differences in STAAR scale scores between the two groups were *not* statistically significant. Even so, the trend was opposite of what would be hoped.

Recommendations

Main recommendations were to (a) ensure higher levels of implementation for existing RM grade levels before expanding to additional grade levels, (b) decide whether to continue using the fifth-grade core curriculum due to low implementation and lack of alignment to district curriculum, and (c) make certain teachers receive adequate guidance on how to meld two different curricula (RM and district).

PROGRAM DESCRIPTION

Purpose and Background

The mission of Reasoning Mind (RM) is “to provide a first-rate math education for every child.”¹ The RM online mathematics curriculum was provided for district second-grade students in 2011-12, expanded to third grade in 2012-13, added to fourth grade in 2013-14, and expanded to fifth grade in 2014-15. During 2015-16, second- and third-grade students at 146 Dallas ISD elementary schools used RM; fourth-grade students at 81 schools enrolled, and fifth-grade students at 13 campuses participated.² Use of RM was required in grades two and three (except for Dealey, Mata, and H. Stone) and optional in grades four and five. Because RM was implemented as a supplemental curriculum in grades two to four, teachers split instructional time between district and RM curricula. RM served as the full core curriculum for grade five.

RM Curriculum, Training, and Support

Through a blended learning model, RM students (a) use individual computers to work through the RM curriculum at their own pace, (b) take notes and write complete problem solutions as they develop mathematical writing skills, and (c) work together to learn and solve mathematics problems. Using real-time RM data, RM teachers provide one-on-one or small group interventions. In addition, when a student struggles with a problem, a request for the “Genie Solution” can be made. The “Genie Solution” provides an explanation for computing the problem.

First-year RM teachers are required to take the RM Qualification Course (QC) and pass the QC exam before using RM with students. Additional training is available to teachers along with campus-based support from an RM implementation coordinator (IC). In 2015-16, RM moved from a modified support model to a flexible support model for supplemental curriculum teachers. Through flexible support, ICs work with *all* RM teachers and use RM data to provide targeted assistance to teachers in most need of help.³ All fifth-grade teachers are supported, which means they receive training, IC visits, and ongoing communication.

PURPOSE AND SCOPE OF THE EVALUATION

The purpose of this report is to summarize 2015-16 RM implementation findings, classroom observation results, campus staff survey findings, and assessment outcomes. The evaluators developed the *Dallas ISD Reasoning Mind Evaluation Framework* to guide the evaluation (see Figure 1). Context information was gathered through review of internal documents, the RM web site, and interviews with RM and Dallas ISD program staff. As for the process evaluation, the evaluators analyzed RM professional

¹ Reasoning Mind: Solving for every variable (brochure provided at GenieCon in Dallas, TX on November 14, 2015)

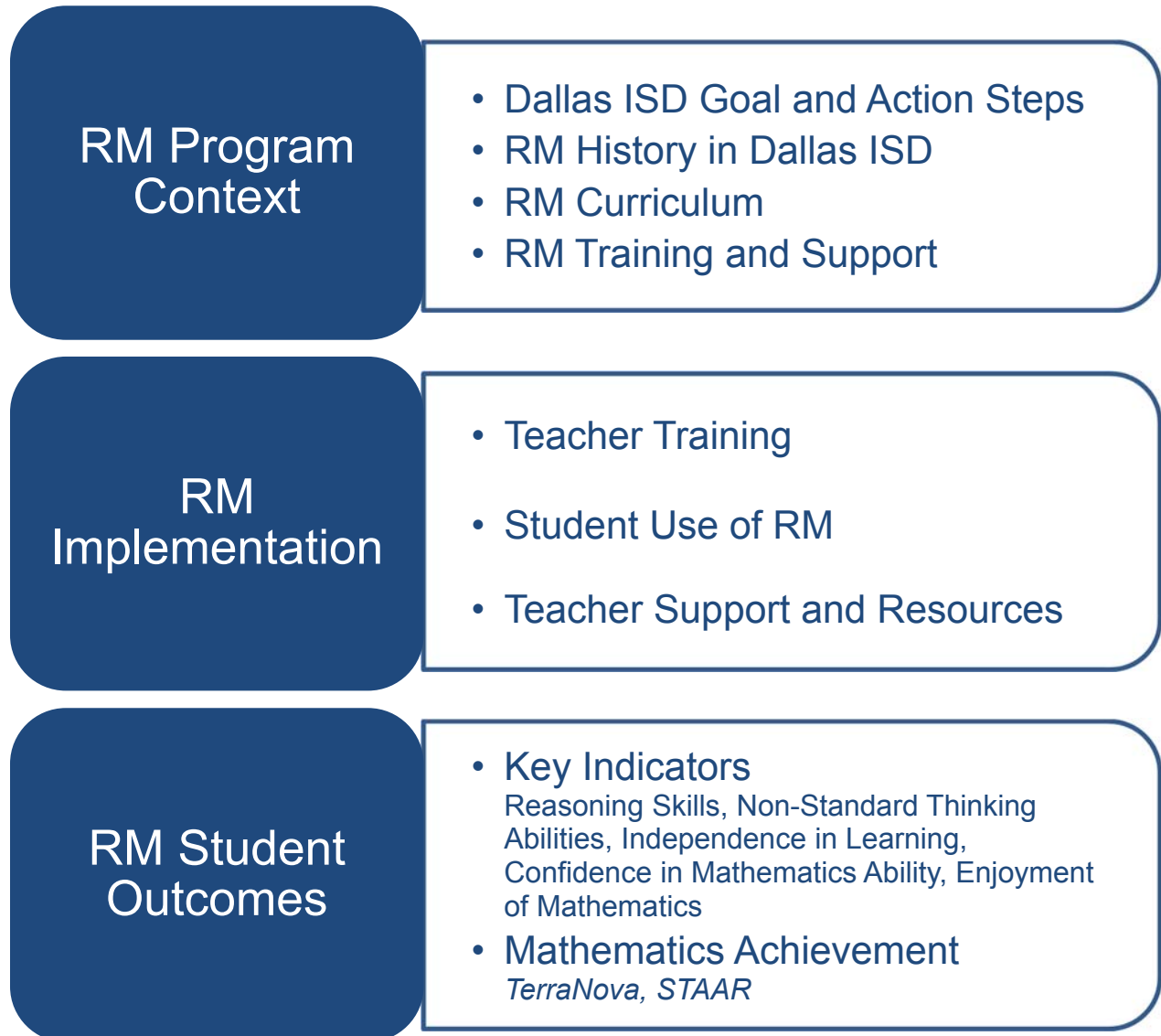
² Not all fifth-grade teachers used RM at the participating schools.

³ From 2012-13 to 2014-15, the modified support model included one supported RM teacher per grade level at each campus (e.g., received direct IC support, an additional 12 hours of training, and classroom observations).

development data, classroom observation data, and student implementation data. Also, the evaluators administered and analyzed campus staff surveys. The outcome evaluation consisted of student change data from teacher surveys and mathematics standardized assessment data. Portions of the 2015-16 RM interim program evaluation report (Bush & Kim, March 2016) were included in this report.

Figure 1: Framework for the 2015-16 Evaluation of Reasoning Mind

Dallas ISD Reasoning Mind Evaluation Framework



Limitations of the Evaluation

Achievement outcomes were limited for second- and third-grade due to (a) the lack of a control group and (b) RM use being supplemental to regular (non-RM) instruction. Specifically, because almost all second- and third-grade Dallas ISD students used RM, it was not possible to have a comparison group. Also, because RM was a supplemental program, it was not known how much student achievement was affected by teachers' regular (non-RM) instruction versus student use of the RM program.

Although a comparison group was used in fourth-grade outcome analyses, the data may have been biased due to a principal selection factor. That is, principal decision to opt in or out of RM may have affected the makeup of the treatment and comparison groups.

For all grade levels, it was difficult for some campuses and teachers to meet district targets due to circumstances that were beyond their control. When reviewing findings related to district targets, it is important to understand the barriers that kept some teachers from implementing RM as planned.

MAJOR EVALUATION QUESTIONS AND RESULTS

What were the sources and amounts of funding for Reasoning Mind?

Methodology

The evaluators reviewed Title I and Title II workscopes as well as information provided through the STEM Math Department. RM supplemental costs were funded through Title funds, and RM fifth-grade costs were funded through district funds.

Results

The budgeted amount for RM in 2015-16 was \$1,925,777, which included \$1,777,370 for the grades two to four supplemental RM program and \$148,407 for the grade five core RM program. The \$1,777,370 for supplemental RM included \$1,252,370 of Title I, Part A funds and \$525,000 of Title II, Part A funds.⁴ The \$148,407 fifth-grade budget included \$57,407 of District Action Plan (DAP) funds for student accounts, \$55,500 of DAP funds for professional development, and \$35,500 of general operating funds for professional development.⁵

What was the context of Reasoning Mind?

Methodology

Following the *Dallas ISD Reasoning Mind Evaluation Framework*, information was reviewed to provide context for RM use in the district. The evaluators conducted informal interviews with RM and

⁴ Costs were \$35 per student account and \$3,500 per school.

⁵ Costs were \$59 per student and \$3,500 per fifth-grade core curriculum teacher.

Dallas ISD program staff members. Also, internal documents were reviewed including Title I and II grant workscopes, district internal documents, the RM dashboard, and RM spring weekly reports.

Results

The RM goal and action steps to achieve it were summarized in a November 2012 memorandum from Superintendent Miles to the Board of Trustees and updated based on additional RM documentation. Teacher and student targets were set to ensure a high level of student implementation (see Figure 2).

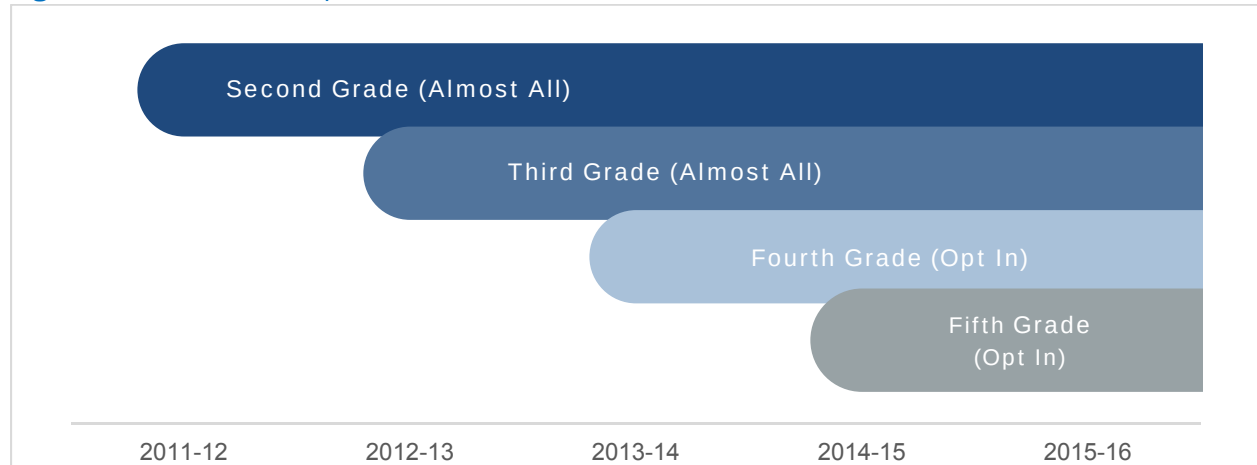
Figure 2: RM Goal, Action Steps, and Implementation Targets

RM Goal: To increase student mathematics achievement		
RM Action Steps	Dallas ISD Action Steps	
- Staff training - On-site coaching/support - Dashboard summaries	- District implements RM with fidelity - Teachers complete training - Schedules include required RM time	
Teacher Training Targets	Student Hour Targets	Student Accuracy Target
First-year teachers will complete Qualification Course before end of first six weeks	- Students in grades two to four will spend at least 60 hours online for year - Students in grade five will spend at least 205 hours online for year	Students will answer 75% or more of Guided Study Level A items correctly each semester

RM History in Dallas ISD

As shown in Figure 3, RM became available to district second-grade students in 2011-12. A new grade level was added each year from 2012-13 to 2014-15. During 2015-16, second- and third-grade students at 146 Dallas ISD elementary schools were enrolled in RM. Fourth-grade students at 81 schools participated, and fifth-grade students at 13 campuses were enrolled. For the supplemental curriculum (grades two to four), all teachers at “opt in” campuses used RM; however, RM use for fifth grade was determined on a teacher by teacher basis (e.g., not all fifth-grade teachers within a campus used RM).

Figure 3: Time Line for Expansion of RM in Dallas ISD



RM Curriculum

Teacher use of RM in grades two through four is supplemental to regular classroom instruction, whereas RM serves as the complete curriculum in grade five. Per the RM web site, “A Reasoning Mind classroom is a hybrid of online and face-to-face instruction, where the teacher gives each child individual help and attention.” Students use individual computers to work through mathematics lessons at their own pace.⁶ When a student struggles with a problem, a request for the “Genie Solution” can be made. The “Genie Solution” provides an explanation for computing the problem. The teacher views the RM administrator screen to note which students are having difficulties. Based on that information, the teacher provides one-on-one interventions or small-group tutorials.

RM Training and Support

As mentioned above, first-year RM teachers were required to pass the RM Qualification Course (QC) prior to using RM with students. Also, optional RM training was available to teachers along with campus-based support from an RM implementation coordinator (IC). In 2015-16, RM moved from using a modified support model to a flexible support model. Through flexible support, ICs worked with *all* RM teachers and used RM data to provide targeted assistance. All fifth-grade teachers were supported, which means they received additional training, IC visits, and ongoing communication from the IC.⁷

What were the demographic characteristics of students involved in Reasoning Mind?

Methodology

RM student data from the Dallas ISD Public Education Information Management System (PEIMS) database were merged into the RM student implementation data files.⁸ Frequency analyses were computed for student demographic characteristics overall, by feeder pattern, and by grade level.

Results

A total of 32,889 students participated in RM during 2015-16.⁹ This included 13,078 (97%) of the district’s second-grade students, 12,848 (96%) of the district’s third-grade students, 6,152 (49%) of the district’s fourth-grade students, and 811 (7%) of the district’s fifth-grade students (see Figure 4). The percentage of district students enrolled in RM slightly increased from Fall 2013 to Fall 2015 for grades 2, 3, and 5 but decreased for grade 4. The number enrolled in fourth grade decreased from 10,448 (130 schools) in 2013 to 9,218 (119 schools) in 2014 to 6,152 (81 schools) in 2015. As mentioned above, RM was required for grades two and three (except for three schools) but was optional for grades four and five.

6 A personalized path is developed for each child based on an assessment that identifies strengths and weaknesses.

7 During the first year of districtwide RM use (2011-12), all RM second-grade teachers were supported. As RM expanded beyond second grade, the district opted to pay for one supported teacher per school for financial reasons.

8 Data came from the October 30, 2015 PEIMS file.

9 RM students were defined as students who were enrolled in grades two to five as of October 30, 2015 (PEIMS snapshot date) and logged into the RM system at least 0.1 hour during 2015-16.

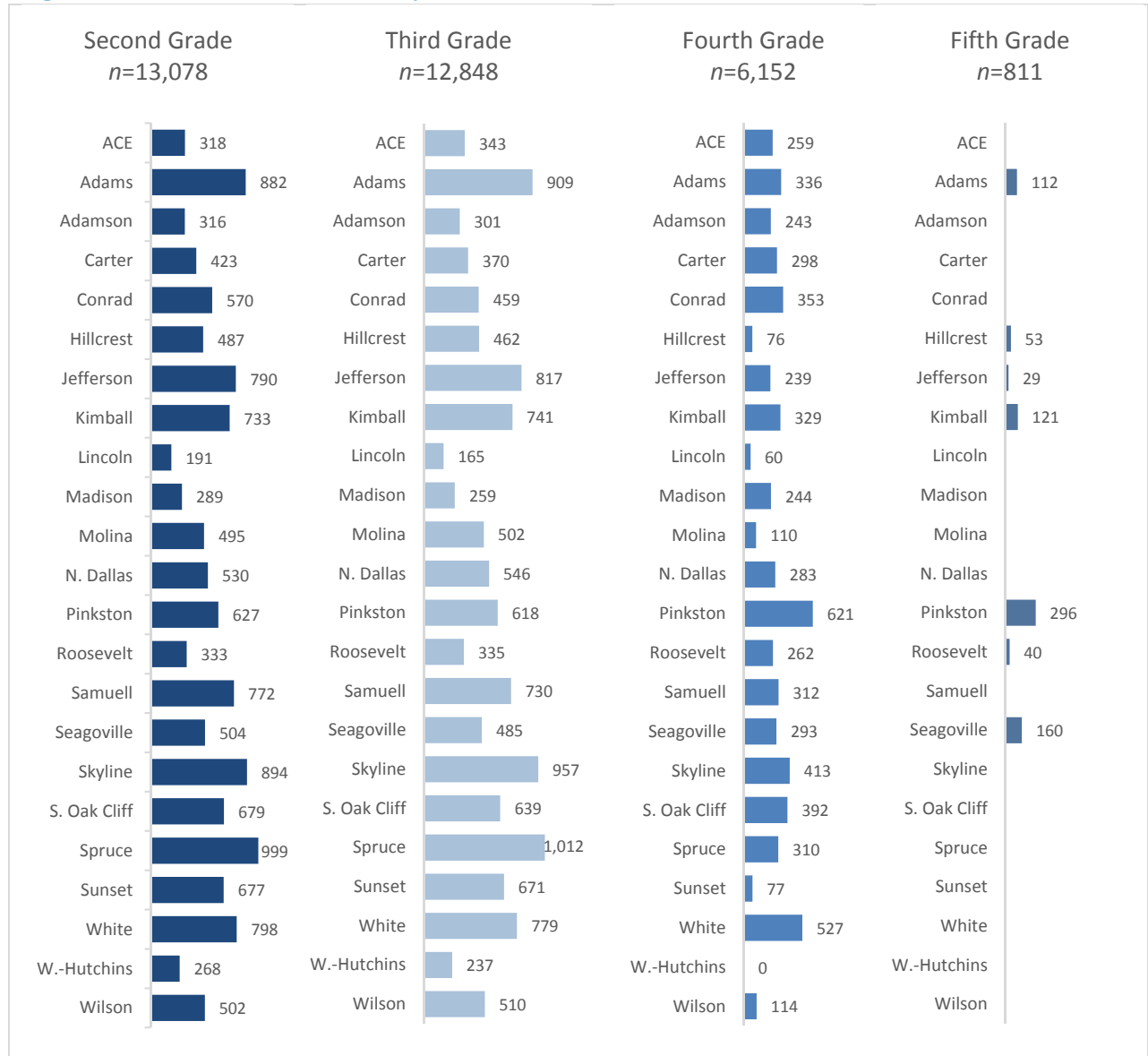
Figure 4: Student and School Participation in RM (2013-14 to 2015-16)

	Grade 2	Grade 3	Grade 4	Grade 5
Number of RM Students	2013-14 12,980 2014-15 13,239 2015-16 13,078	12,537 12,802 12,848	10,448 9,218 6,152	Not Applicable 411 811
% of All District Students	2013-14 95% 2014-15 95% 2015-16 97%	95% 97% 96%	83% 72% 49%	Not Applicable 3% 7%
Number of Schools	2013-14 147 2014-15 147 2015-16 146	147 147 146	130 119 81	Not Applicable 6 13

Note. Students in schools that did not implement RM or stopped using RM early in the fall were excluded from analyses. For grades 2 to 4, this included students from Dealey, Mata, and H. Stone. As for grade five, J. Stone students were excluded because the teacher opted out of RM prior to the end of the first semester.

When studied by feeder pattern, RM enrollment varied widely (see Figure 5). For example, the number of second-grade students ranged from 191 in the Lincoln feeder to 999 in the Spruce Feeder, whereas the number of third graders ranged from 165 in Lincoln and 1,012 in Spruce, respectively. As for fourth grade, RM participants ranged from 0 (Wilmer-Hutchins feeder) to 621 (Pinkston feeder). Fifth-grade students in 7 of the district's 23 feeders participated in 2015-16; the number enrolled ranged from 29 (Jefferson feeder) to 296 (Pinkston feeder).

Figure 5: Number of RM Students by Grade and Feeder Pattern in 2015-16

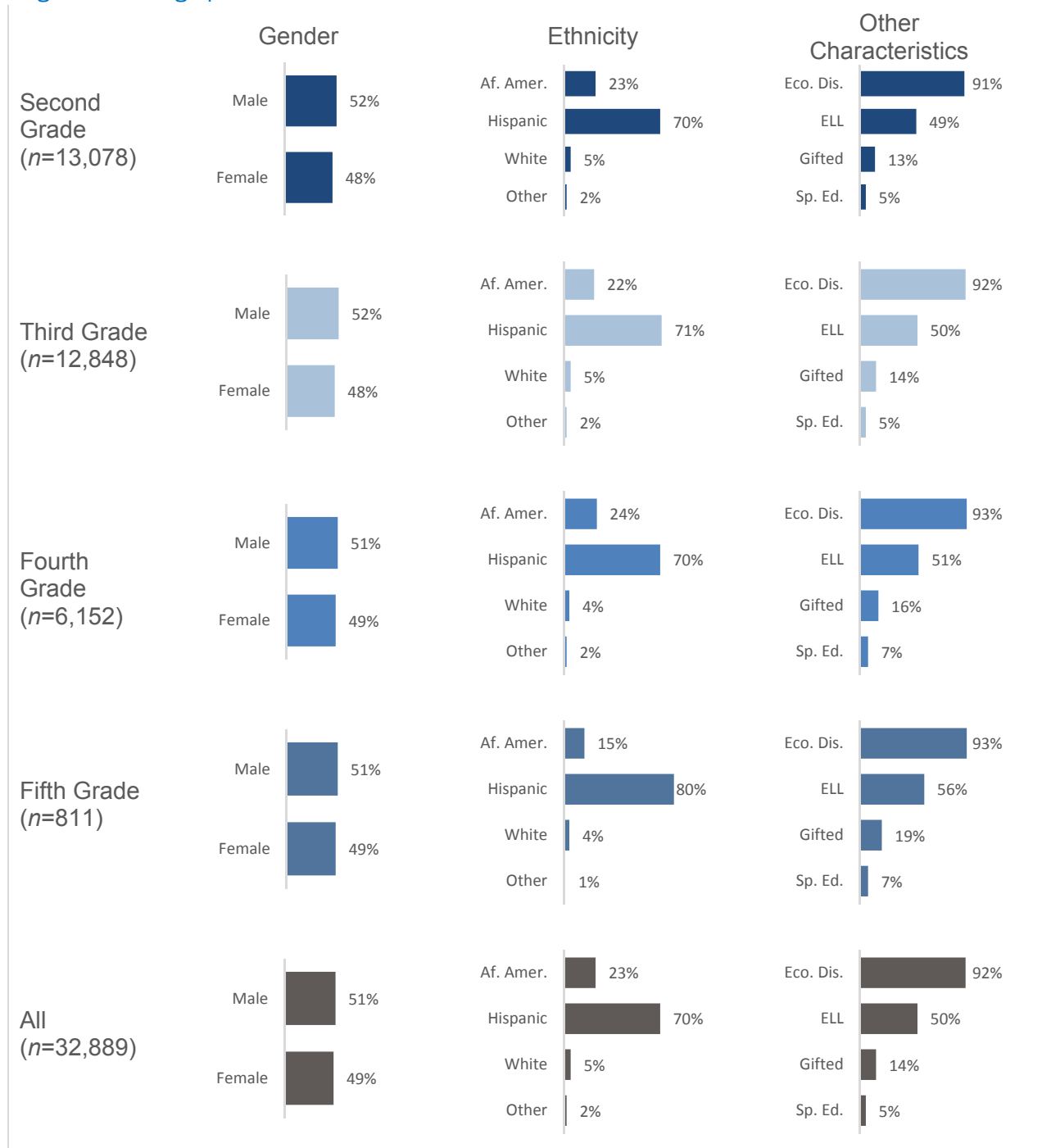


Source. PEIMS district database (10/30/2015) for all students in the RM database.

Note. Analysis was limited to students in the RM database that were in Dallas ISD as of PEIMS snapshot date (10/30/2015) and with RM hours equal to or greater than 0.1. Students in schools that did not implement or stopped using RM in 2015-16 (Dealey, Mata, and H. Stone elementary schools for grades 2 to 4 and J. Stone elementary school for grade 5) were excluded from analyses. The figure excludes three Hospital/Homebound students ($n=1$ for each grade from grades 2 to 4).

As seen in Figure 6, the majority of RM students were economically disadvantaged (92%) and Hispanic (70%). Fifty percent were English language learners (ELLs). When reviewed by grade level, demographic results were similar with one exception. That is, a greater percentage of RM fifth-grade students were Hispanic (80%) in comparison to RM students in grades two to four (70% to 71%). Appendix A contains demographic information by grade level, student group, and feeder pattern.

Figure 6: Demographic Characteristics of RM Students in 2015-16



Source. PEIMS district database (10/30/2015) for all students in the RM database.

Note. Af. Amer.=African American. Eco. Dis.=economically disadvantaged. Sp. Ed.=special education. Other ethnicity included Asian, American Indian, Native Hawaiian or Other Pacific Islander, two or more races, and not available.

Was the Reasoning Mind program used by students as planned?

Methodology

RM provided the evaluators with student data files for 2015-16. The files included student time spent online using RM, number of objectives completed, and Guided Study Level A accuracy rates. Frequency and descriptive analyses were conducted to determine district progress on RM hour and accuracy targets overall, by grade level, and by campus and grade level. Next, high and low implementation campus groups were determined. *High* implementing campuses for each grade were selected based on the following criteria: (a) hour mean was at least 80 percent of the expected district hour target (26 hours or higher for grades two to four and 91 or higher for grade five), (b) 50 percent or more met the hour target, (c) accuracy mean was 60 percent or higher, and (d) 50 percent or more met the district accuracy target (75 percent or higher). *Low* implementing campuses were selected based on the following criteria: (a) hour mean was less than 80 percent of the hour target, and (b) 49 percent or fewer met the hour target. Remaining campuses were classified as *medium* implementation campuses.

Results

District Student Implementation Targets

Based on RM fidelity expectations, district central administrators set two student targets to ensure a high level of student implementation. Targets related to spending the expected amount of time online to move through RM objectives and answering an adequate percentage of mathematics items correctly.

- Students will meet 2015-16 grade-level hour expectations (60 hours for grades two to four and 205 hours in grade five).
- Students will answer 75 percent of RM Guided Study Level A problems correctly.¹⁰

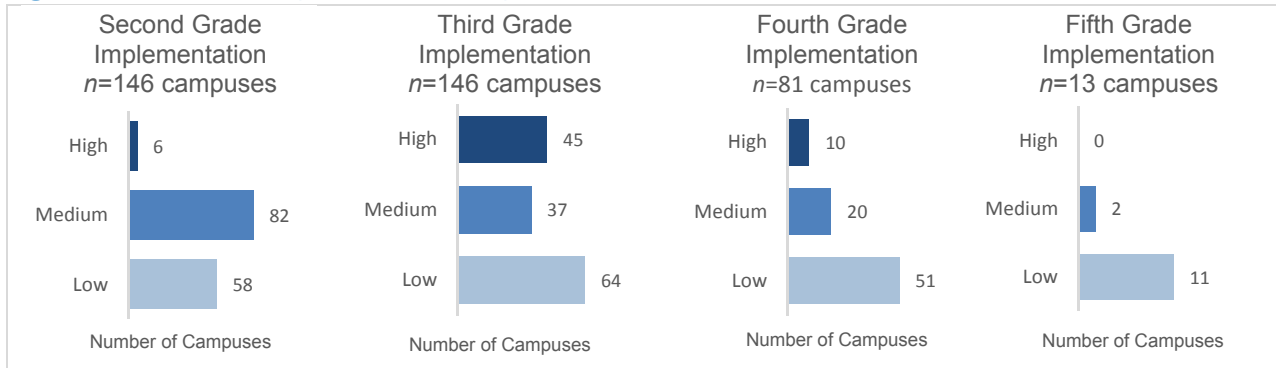
School-Level Implementation

As in previous years, review of RM implementation data by campus revealed great variation within schools and within grade levels at the same schools (see Appendix B). Key findings related to school level of implementation follow (see Figure 7, Appendix C, and Appendix D).

- Most of the campuses with fourth (63%) and fifth (85%) grade were classified as low implementation campuses.
- Schools were mainly split between the medium (56%) and low (40%) categories for second grade, and split between all three categories for third grade (44% low, 25% medium, 31% high).
- The sizeable proportion of campuses classified as “low implementation” (40% to 85%) is of concern; this is especially true for fifth grade because RM serves as the core fifth-grade curriculum.

¹⁰ The district chose 75 percent as the accuracy target because prior year evaluation results showed that students with high accuracy rates performed best on standardized assessments. The RM system includes mathematics problems in learning mode (Guided Study), review mode (Wall of Mastery), and test mode (STAAR preparation for third, fourth, and fifth grades). In the learning and review modes, problems increase in difficulty from Level A (easiest) to Level C (hardest). The accuracy target was based on Guided Study Level A items.

Figure 7: 2015-16 Campus-Level RM Implementation



Note. *High* implementing campus criteria: (a) hour mean was at least 80 percent of the expected the hour target, (b) 50 percent or more met the hour target, (c) mean accuracy was 60 percent or higher, and (d) 50 percent or more met the accuracy target. *Low* implementing campus criteria: (a) mean hours were less than 80 percent of the hour targets, and (b) 49 percent or fewer met the hour target. Remaining campuses were classified as having a *medium* level of implementation.

RM Student-Level Implementation

Consistent with past years, a sizeable percentage of students in all grades did not meet the grade-level hour target for 2015-16. In contrast, many third- (80%) and fourth-grade (60%) students met the accuracy target (see Figure 8 and Appendices E and F). Interestingly, the percentage that met the hour target decreased as grade level increased. There were noticeably more fourth- and fifth-grade students (69% and 78%, respectively) in the “did not meet” category than second- and third-grade students (45% and 49%, respectively).

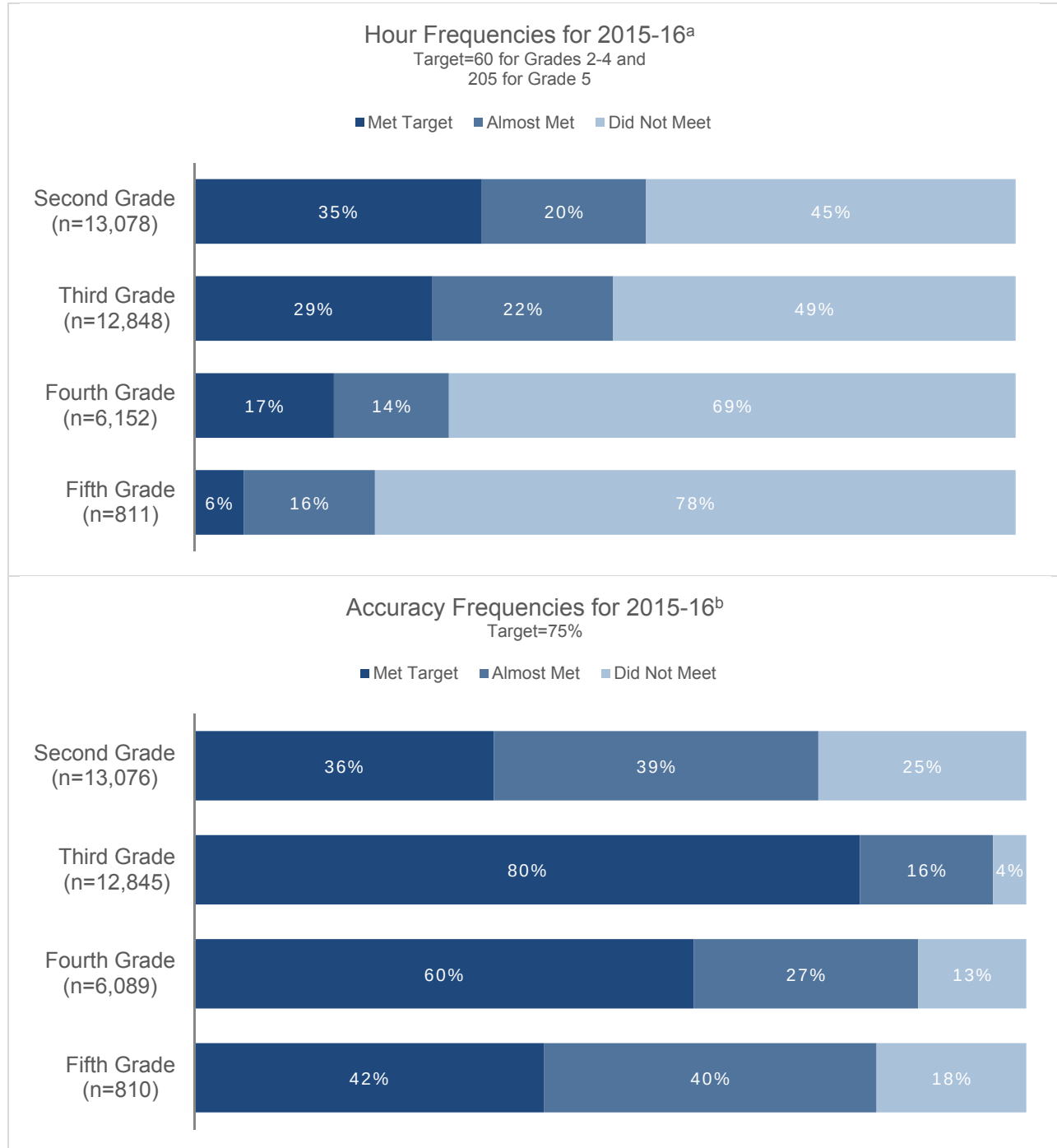
A review by semester revealed some grade-level differences (see Figure 9).

- The percentage that “did not meet” the hour target was especially high for fourth- and fifth-grade students both semesters (67% to 72% for fourth graders and 56% to 84% for fifth graders). Although the percentages that “met” the hour target increased for second- (29% to 41%) and third-grade (30% to 32%) students, a sizeable percentage “did not meet” the target either semester.
- Whereas less than 50 percent of second- and fifth-grade students “did not meet” the accuracy target both semesters (35% to 41% for second graders and 44% to 47% for fifth graders), most students in grades three and four “met” the accuracy target (78% to 81% for third graders and 61% for fourth graders).
- There was a notable fall to spring decrease in the percentage of fifth-grade students that “met” the hour (12% to 4%) target. This is of concern because the fifth-grade RM curriculum serves as the full curriculum and is not supplemental to the regular curriculum like in grades two to four.

When reviewed over time (2012-13 to 2015-16), student hours spent online for grades two to four were better in spring than in fall for the last four school years (see Figure 10). In 2015-16, fifth-grade mean hours were noticeably below the target both semesters. Students in grades three to five met the accuracy target with three exceptions (Fall 2012 for grade three and Fall 2015 and Spring 2016 for grade

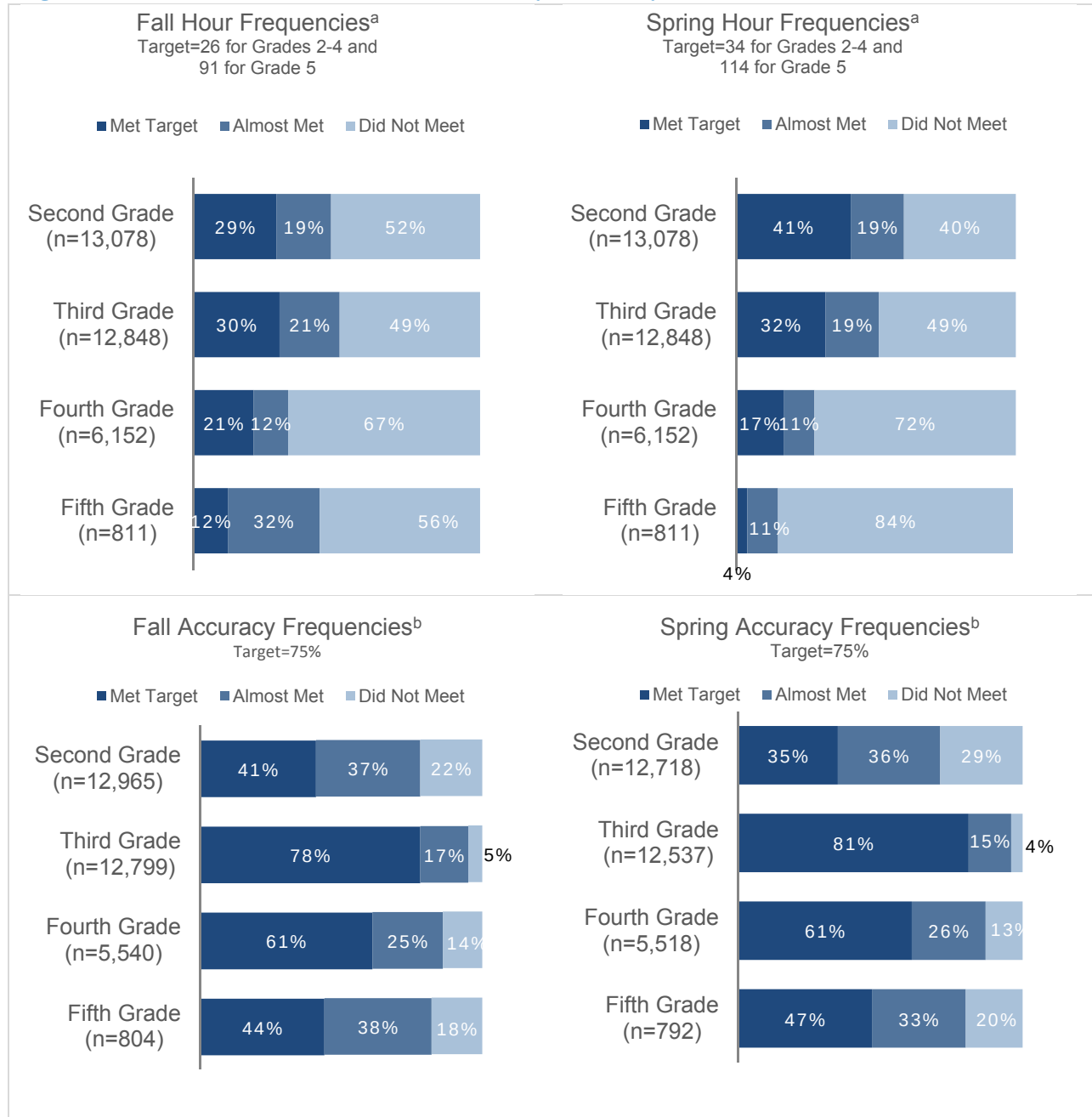
five), but second-grade mean accuracy rates were below the target for seven of eight comparisons (see Figure 11).

Figure 8: 2015-16 RM Student Hour and Accuracy Results by Grade Level



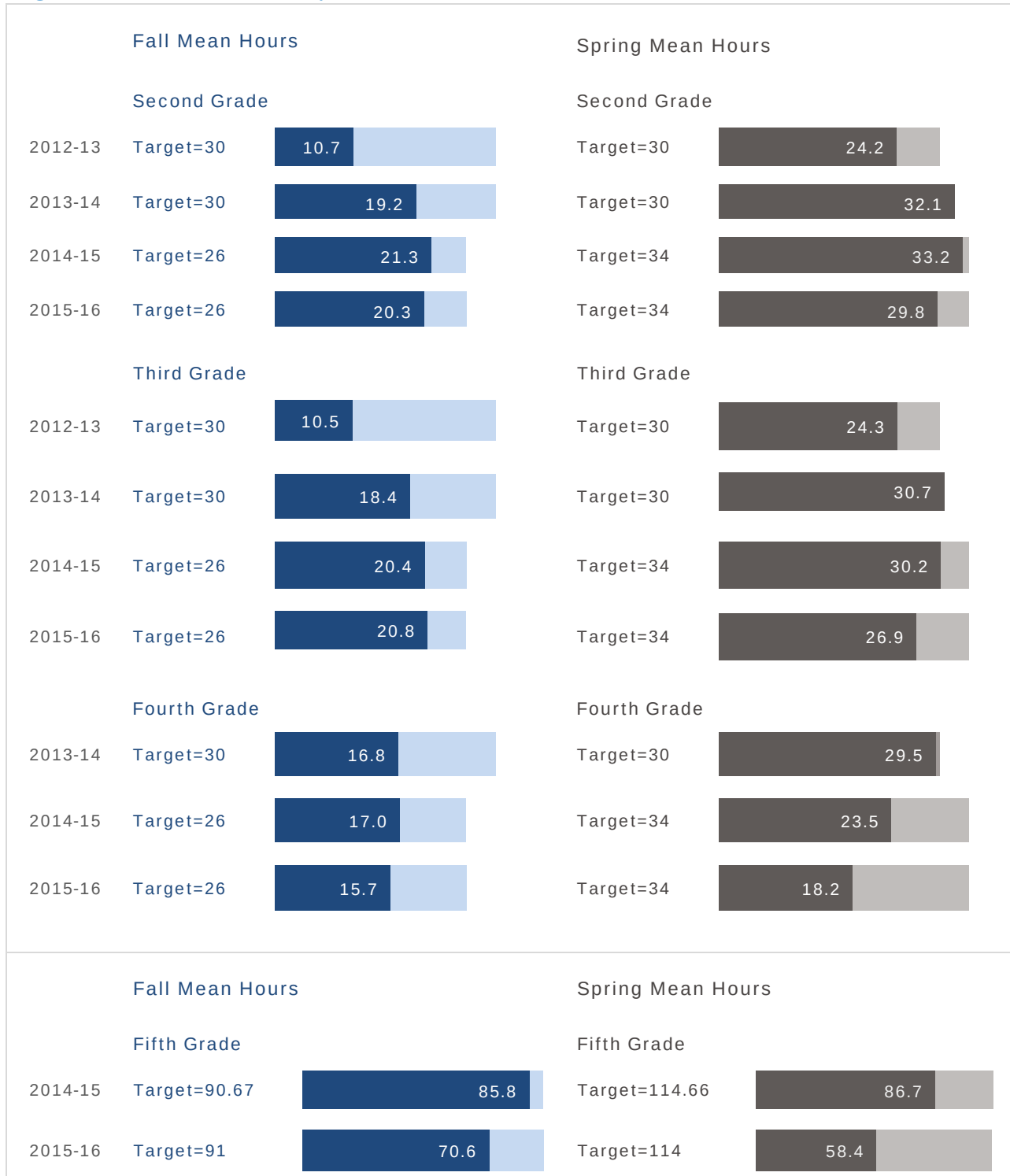
Note. The number of students with hour and accuracy data differ for each grade because some students did not have Level A Guided Study accuracy data. ^a Met=Logged 100 percent of expected hours. Almost Met=Logged 80 to 99 percent of expected hours. Did Not Meet=Logged less than 80 percent of expected hours. ^b Met=Attained Guided Study Level A accuracy rate of 75 percent or higher. Almost Met=Accuracy rate between 60 and 74 percent. Did Not Meet=Accuracy rate of less than 60 percent.

Figure 9: 2015-16 RM Student Hour and Accuracy Results by Semester and Grade Level



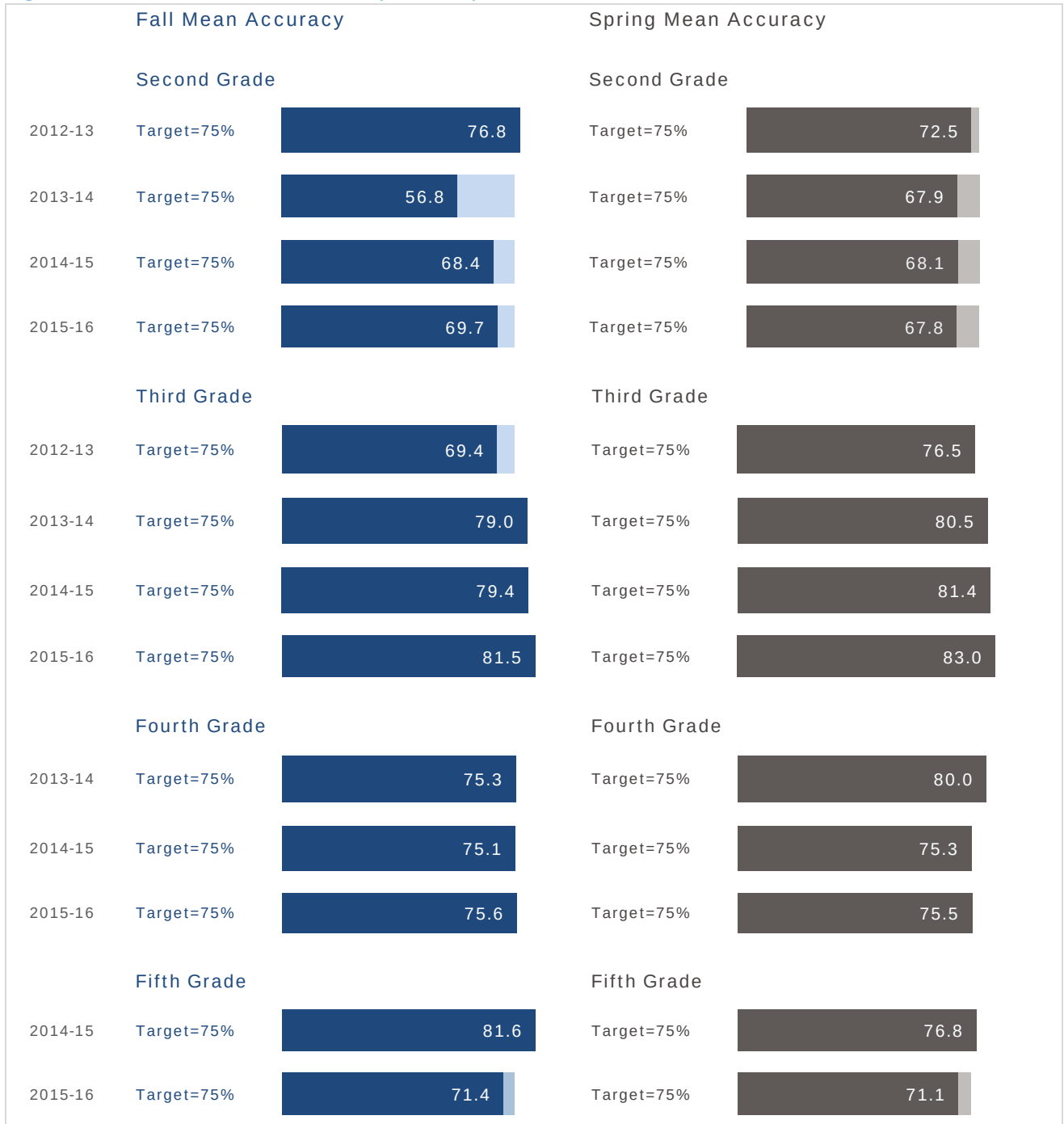
Note. The number of students with hour and accuracy data differ because some students did not have Level A Guided Study accuracy data. ^a Met=Logged 100 percent of expected hours. Almost Met=Logged 80 to 99 percent of expected hours. Did Not Meet=Logged less than 80 percent of expected hours. ^b Met=Attained Guided Study Level A accuracy rate of 75 percent or higher. Almost Met=Accuracy rate between 60 and 74 percent. Did Not Meet=Accuracy rate of less than 60 percent.

Figure 10: RM Student Hours by Semester and Grade Level from 2012-13 to 2015-16



Note. RM was available to second- and third-grade students the past four school years, whereas RM was in place for fourth-grade students in 2013-14, 2014-15, and 2015-16. RM was available to fifth grade as a core curriculum for the first time in 2014-15. The light blue shaded area of the graph shows the fall deficit in expected time (if any), whereas the light brown shaded area shows the spring deficit in expected time (if any).

Figure 11: RM Student Mean Accuracy Rates by Semester and Grade Level from 2012-13 to 2015-16



Note. Accuracy=percentage of Guided Study Level A items answered correctly. RM was available to second- and third-grade students the past four school years, whereas RM was in place for fourth-grade students in 2013-14, 2014-15, and 2015-16. RM was available to fifth grade as a core curriculum for the first time in 2014-15. The light blue shaded area of the graph shows the fall deficit in expected accuracy (if any), whereas the light brown shaded area shows the spring deficit in expected accuracy (if any).

Did staff members participate in Reasoning Mind training as planned?

Methodology

RM provided professional development data that included Fall 2015 training information. Frequency analyses were conducted to determine RM training completion rates. Qualification Course (QC) completion data were reviewed overall, by time period, and by district feeder pattern. Attendance rates for other RM professional development was reviewed overall and by supplemental (grades two to four) and core (grade 5) curriculum teachers.

Results

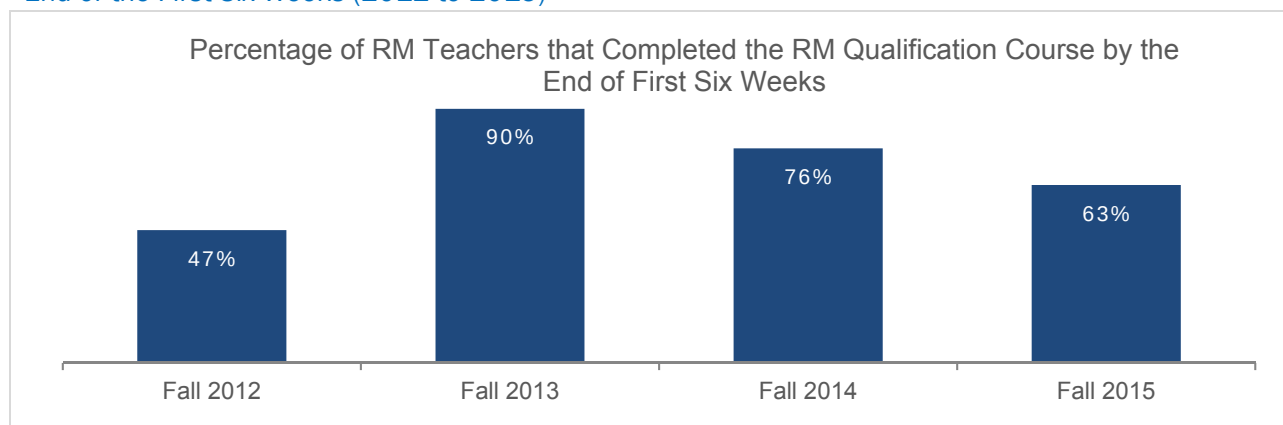
RM Professional Development Requirements

First-year teachers were required to complete the RM QC before using RM with students. As a result, all new RM teachers were expected to complete the QC prior to or early in the school year (before the end of the first six weeks). In addition to the QC, RM offered additional training courses (in person and online) for all RM teachers. No campus administrator training was provided during Fall 2015.

Qualification Course for Teachers

As mentioned above, all teachers were expected to complete the QC before or at the onset of the school year. Whereas 63 percent of first-year RM teachers completed the QC course by the end of the first six weeks, 37 percent did not (see Figure 12.). This means a sizeable number of students could not begin using RM until later in the school year. Delays mainly affected students in grades two to four. All teachers that used RM as the core curriculum (fifth grade) were trained in a timely manner except for one long-term substitute teacher. See Appendix G for detailed QC information.

Figure 12: Percentage of First-Year RM Teachers that Completed the RM Qualification Course by the End of the First Six Weeks (2012 to 2015)



Additional Teacher Professional Development

About a fifth ($n=177$) of the district's almost 1,000 RM teachers participated in additional RM professional development during the fall semester. Of the 177, 171 used supplemental RM (grades 2 to

4), and the remaining 6 taught the fifth-grade core curriculum. Most (68%) took one RM course, 22 percent completed two courses, and 10 percent participated in three courses. As mentioned above, teachers could participate in either in-person or online courses; participation was optional.¹¹

Approximately 90 district staff members (teachers, campus administrators, central administrators) participated in RM's full-day Dallas GenieCon 2015 conference. GenieCon was held at Conrad High School on November 14, 2015. GenieCon included an opening speech followed by series of breakout sessions. Jim Gates, a renowned physicist, professor, and member of President Obama's Advisors on Science and Technology, was the featured speaker. Attendees could attend up to four breakout sessions with topics ranging from student motivation ideas, mental math, best practices, data-driven instruction, problem solving, special student populations, recent RM research, and so forth.

What were the results of Reasoning Mind classroom observations?

Methodology

Classroom observations were conducted to note how RM was being implemented. First, School Leadership staff members conducted ten-minute supplemental classroom walkthroughs in second- and third-grade RM classes during October 2015. Second, evaluators carried out 45-minute observations in fifth-grade RM core curriculum classrooms between the end of October 2015 and January 2016.

Supplemental Classroom Walkthroughs (Grades 2 and 3)

At the request of the Chief of School Leadership, Feeder Pattern Executive Directors and selected staff members were asked to conduct ten-minute walkthroughs in all second- and third-grade Reasoning Mind (RM) classrooms between October 20 and October 23, 2015. The evaluators developed the observation instrument, and Science, Technology, Engineering, and Mathematics (STEM) staff members oversaw the data collection process.¹² The purpose of the observation instrument, *Reasoning Mind Central Administrator Observations – Fall 2015*, was to capture a snapshot of RM second- and third-grade classrooms using the RM supplemental curriculum. Specifically, the observers reported information about the school, grade, section, teacher, setting, teacher activities, student use of RM notebooks, student on-task behavior, type of technology used, and technology problems (if any). The evaluators conducted frequency and crosstabs analyses to examine data overall and by grade level. Thematic analyses were carried out for open-ended observer comments.

RM Core Program Observations – Grade 5

Evaluators conducted classroom observations in RM fifth-grade core curriculum classrooms between October 29, 2015 and January 15, 2016. With the exception of one teacher, three 45-minute

¹¹ Online courses, designed to take two hours, could be completed in multiple sittings. That is, if desired, teachers could begin a course, sign out, and return later to pick up where they left off. Teachers could earn credits beyond the required credits if they chose to do so.

¹² STEM staff members created paper and Google Form versions of the RM observation form.

observations were conducted per classroom for a total of 67 observations.¹³ The purpose of the observations was to understand how fifth-grade teachers were implementing RM. The evaluators developed the *RM Fifth-Grade Core Curriculum Observation Form* to collect information about classroom setting, student use of RM notebooks, student on-task behavior, type of technology used, and technology problems (if any). In addition, the form provided a way to gather time-interval ratings of teacher and student activities.¹⁴ The form also included a place for observers to write descriptive notes. Evaluators computed the mean percent of time spent on student and teacher activities, carried out frequency analyses on observation indices, and conducted thematic analyses of open-ended observer comments.

Results

Supplemental Classroom Walkthroughs (Grades 2 and 3)

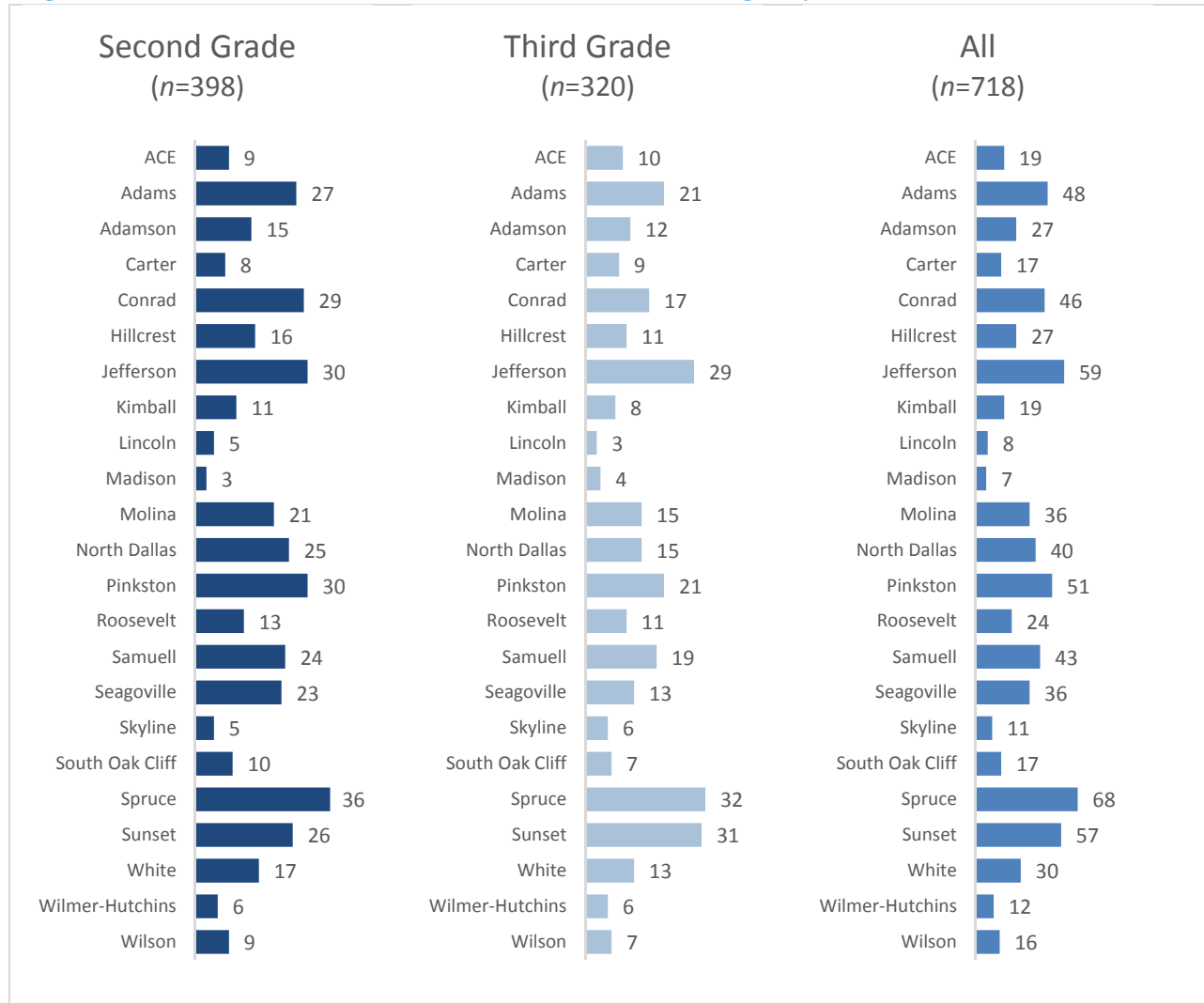
A total of 761 classrooms were visited including 431 (57%) second-grade classes and 330 (43%) third-grade classes. Most observations were conducted during the last two weeks of October 2015; due to scheduling issues, a few were conducted in November. Of the 761 visits, 94 percent were using RM as scheduled, and 6 percent were not. Remaining results are limited to the 718 classrooms (398 second grade and 320 third grade) that were using RM during walkthroughs. As seen in Figure 13, when reviewed by feeder pattern, the number of walkthroughs ranged from 7 (Madison) to 68 (Spruce). The number of students using RM varied from 2 to 50 with a mean of 17.0.¹⁵ Appendix H shows the number of walkthroughs conducted by feeder pattern, school, and grade.

¹³ One fifth-grade teacher stopped using RM at the end of November. As a result, the teacher was observed at the end of October only. Window 1=October 29-November 2, 2015. Window 2=December 1-7, 2015. Window 3=January 11-15, 2016.

¹⁴ For time interval ratings, the observers made the first rating after five minutes and then made a rating every five minutes after that.

¹⁵ In some walkthroughs, only a small group of students used RM rather than the entire class.

Figure 13: Number of RM Supplemental Classroom Walkthroughs by Grade and Feeder Pattern



Note. There were 43 walkthroughs in which RM was not being used as scheduled. These classrooms were not included in the counts above but are shown in Appendix H.

Supplemental classroom walkthrough results should be viewed with caution due to the following limitations. First, no walkthroughs occurred at 8 schools, and walkthroughs were not made for one of the two grade levels at another 18 campuses (see Table 1).¹⁶ Second, there were some duplicate entries. Some classes ($n=26$) were observed twice either by different observers ($n=20$) or at different times ($n=6$); these entries were included in analyses. Other duplicate entries were identical ($n=16$); these entries were not included in analyses.

¹⁶ It should be noted that some of these schools were visited, but RM was not being implemented as scheduled (see Appendix H).

Table 1: Incomplete Walkthroughs by Feeder and Campus

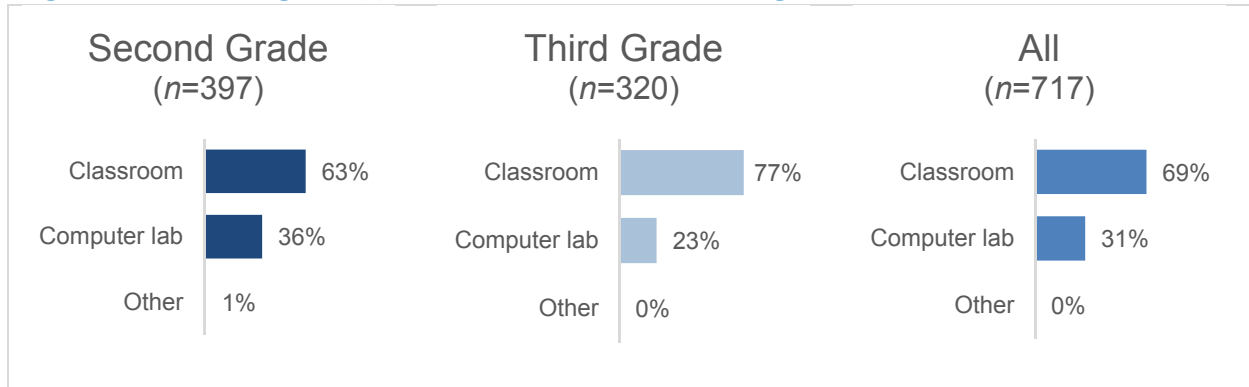
High School Feeder	Campus	Grades Not Observed
Conrad	Highland Meadows	No 3 rd grade
Hillcrest	Rogers	No 2 nd or 3 rd grade
Jefferson	Williams	No 3 rd grade
Jefferson	Saldivar	No 2 nd or 3 rd grade
Kimball	Brashear	No 2 nd grade
Kimball	Donald	No 2 nd grade
Kimball	Henderson	No 2 nd grade
Kimball	Moreno	No 3 rd grade
Kimball	Stemmons	No 3 rd grade
Kimball	Webster	No 2 nd or 3 rd grade
Madison	King	No 3 rd grade
Samuell	Adams, J	No 2 nd or 3 rd grade
Samuell	San Jacinto	No 2 nd grade
Skyline	Callejo	No 2 nd grade
Skyline	Conner	No 2 nd or 3 rd grade
Skyline	Truett	No 3 rd grade
Skyline	Urban Park	No 2 nd grade
South Oak Cliff	Bushman	No 2 nd or 3 rd grade
South Oak Cliff	Jordan	No 3 rd grade
South Oak Cliff	Russell	No 2 nd or 3 rd grade
South Oak Cliff	Young	No 2 nd or 3 rd grade
White	Caillet	No 3 rd grade
White	Degolyer	No 2 nd grade
Wilson	Jackson	No 3 rd grade
Wilson	Lakewood	No 2 nd grade
Wilson	Lee, R	No 3 rd grade

Note. When reviewed by feeder pattern, the number of campuses with incomplete walkthroughs out of the total number of campuses follow: Conrad (1 of 5), Hillcrest (1 of 5), Jefferson (2 of 9), Kimball (6 of 9), Madison (1 of 3), Samuell (2 of 8), Skyline (4 of 8), South Oak Cliff (4 of 8), White (2 of 9), Wilson (3 of 5). For detailed information, see Appendix H.

Students most often accessed RM in a classroom (69%); 31 percent went to a computer lab (see Figure 14). In two-thirds of the classes observed, all students used their RM notebooks; however, in 21 percent of classrooms, 1 to 3 students did not use their notebooks, and in 13 percent of classes, 4 or more students did not use notebooks (see Figure 15).¹⁷ On-task behavior was high for the most part with all students on task in 80 percent of RM walkthroughs (see Figure 16).

¹⁷ Students are expected to use notebooks to (a) take notes, (b) work mathematics problems, and (c) review notes while working mathematics problems.

Figure 14: RM Setting in Supplemental Classroom Walkthroughs



Note. One observer did not complete RM setting information during a second-grade classroom walkthrough.

Figure 15: RM Student Notebook Use in Supplemental Classroom Walkthroughs

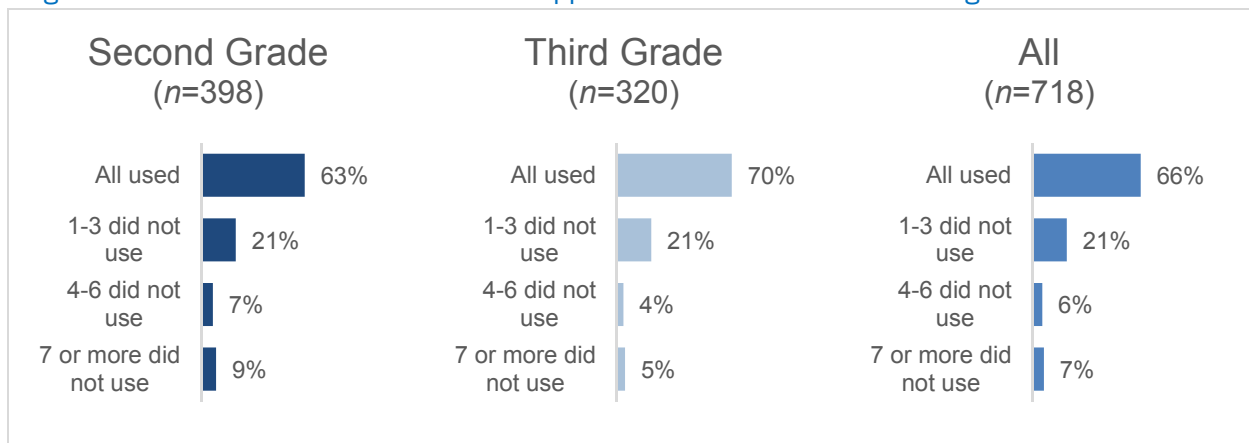
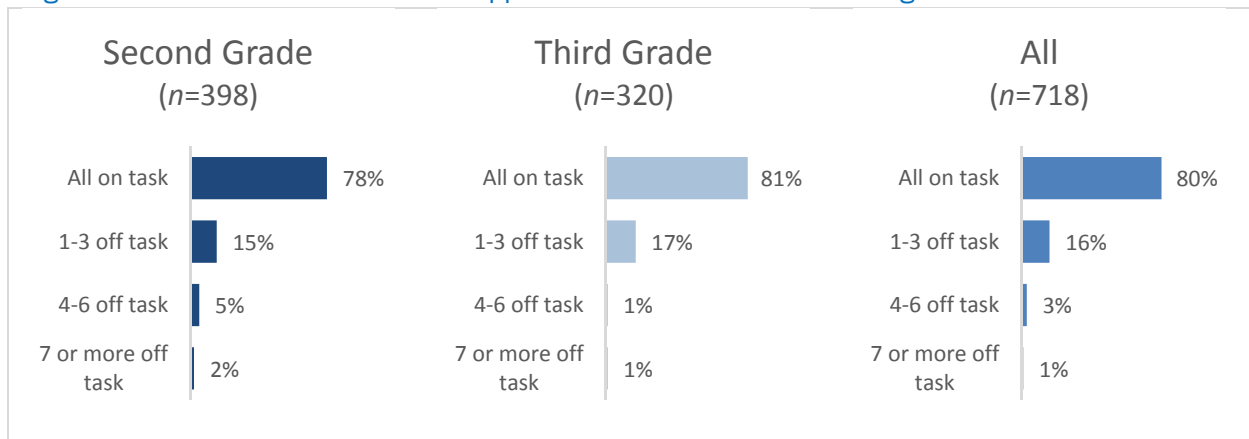


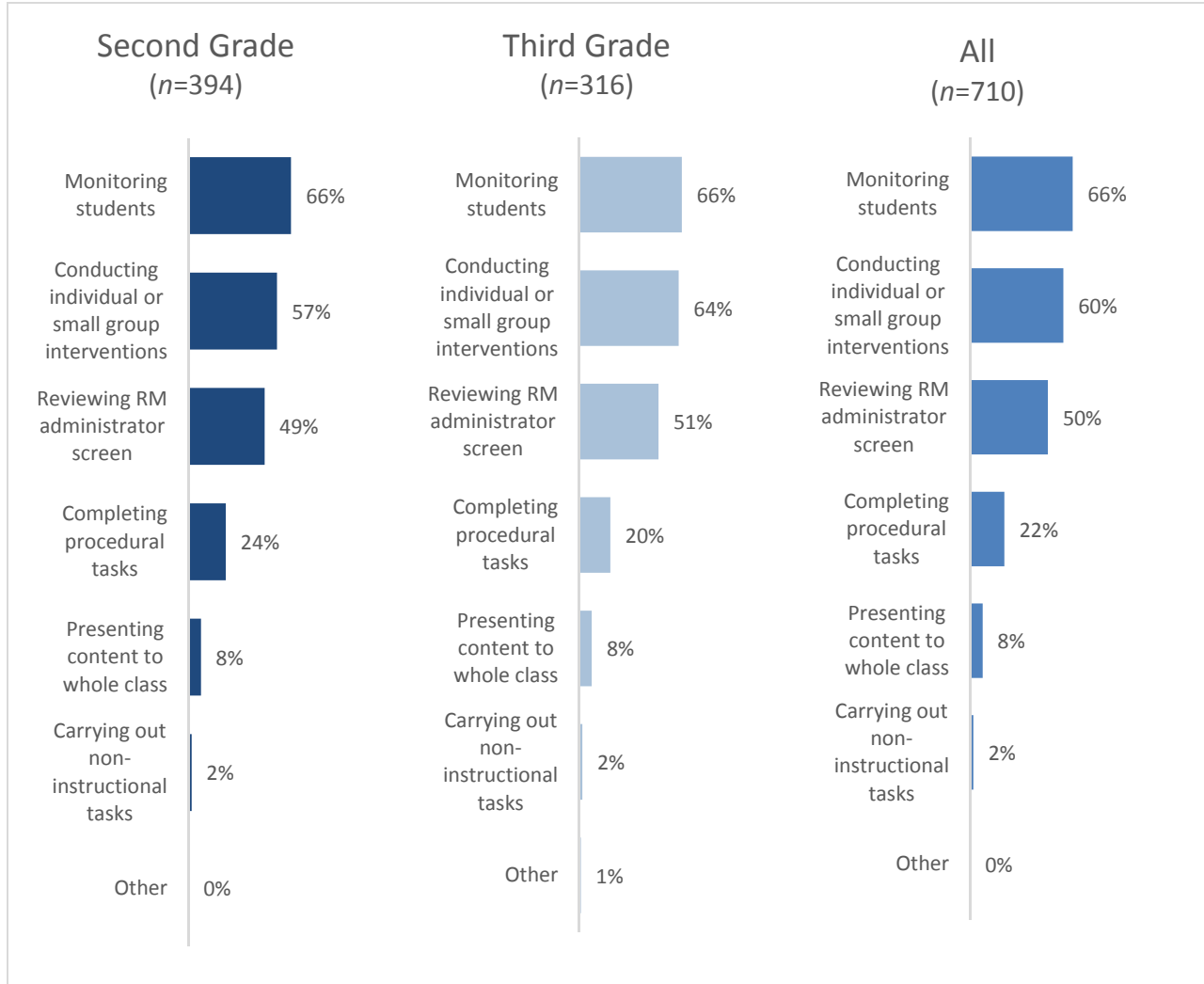
Figure 16: RM Student Behavior in Supplemental Classroom Walkthroughs



During RM walkthroughs, teachers spent most of the time monitoring students (66%), conducting individual or small group interventions (60%), and reviewing the RM administrator screen (50% - see

Figure 17).¹⁸ About a fifth of teacher time was allotted to overseeing procedural tasks (students getting laptops and notebooks out, logging in and out, etc.).¹⁹

Figure 17: RM Teacher Time Spent by Activity in Supplemental Classroom Walkthroughs



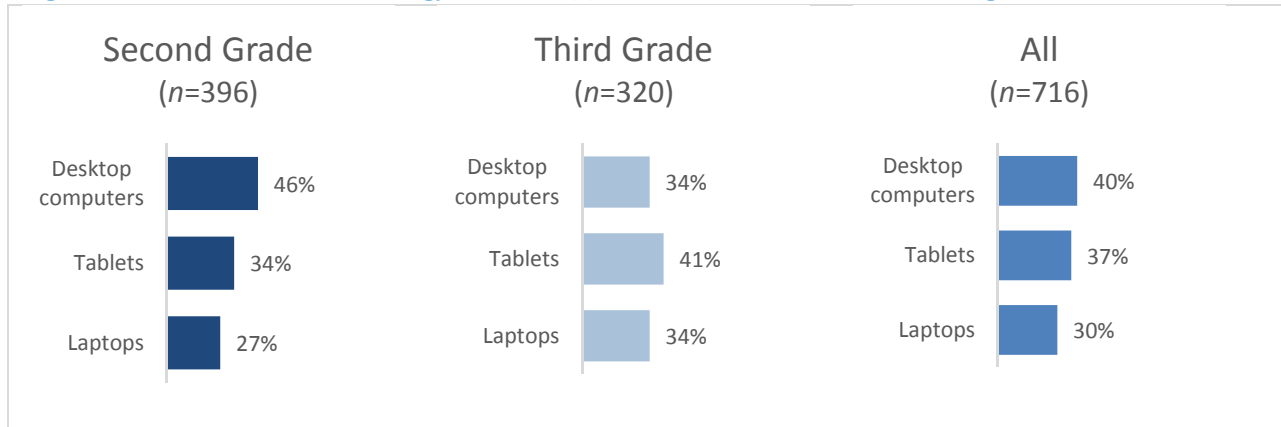
Note. Percentages do not add to 100 because observers could mark more than one activity. Eight observers did not specify teacher activity information.

Interestingly, RM second graders most often used desktop computers (46%), whereas RM third graders most frequently used tablets (41% - see Figure 18). Observers noted one or more technology problems in 32 percent of walkthroughs; 14 percent of classes had non-working computers, computer accessory issues, and/or connectivity/internet issues (see Figure 19).

¹⁸ The majority of teacher time should be allocated to monitoring and/or pulling out one or more students for interventions. RM teachers are expected to use the administrator screen to see how students are progressing and to target students for intervention.

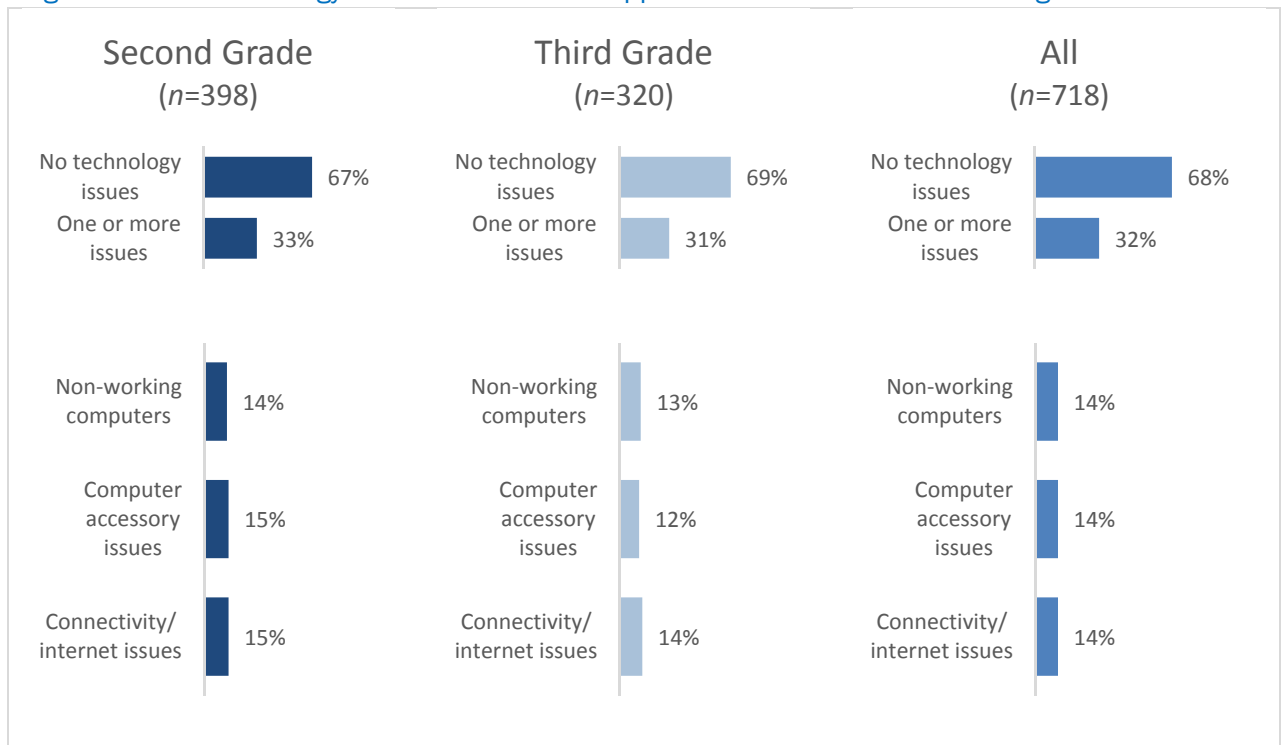
¹⁹ Procedural tasks are typically observed at the beginning and end of class as students get out/put up computers, log in/log out, and/or get out/put up notebooks, etc. This would also be expected when the teacher calls one or more students out as part of a targeted intervention.

Figure 18: RM Student Technology Use in Supplemental Classroom Walkthroughs



Note. Percentages do not add to 100 because more than one type of technology was observed in some classrooms. Two observers did not specify the type of technology used.

Figure 19: RM Technology Issues Observed in Supplemental Classroom Walkthroughs



Note. Observers could mark more than one type of technology issue.

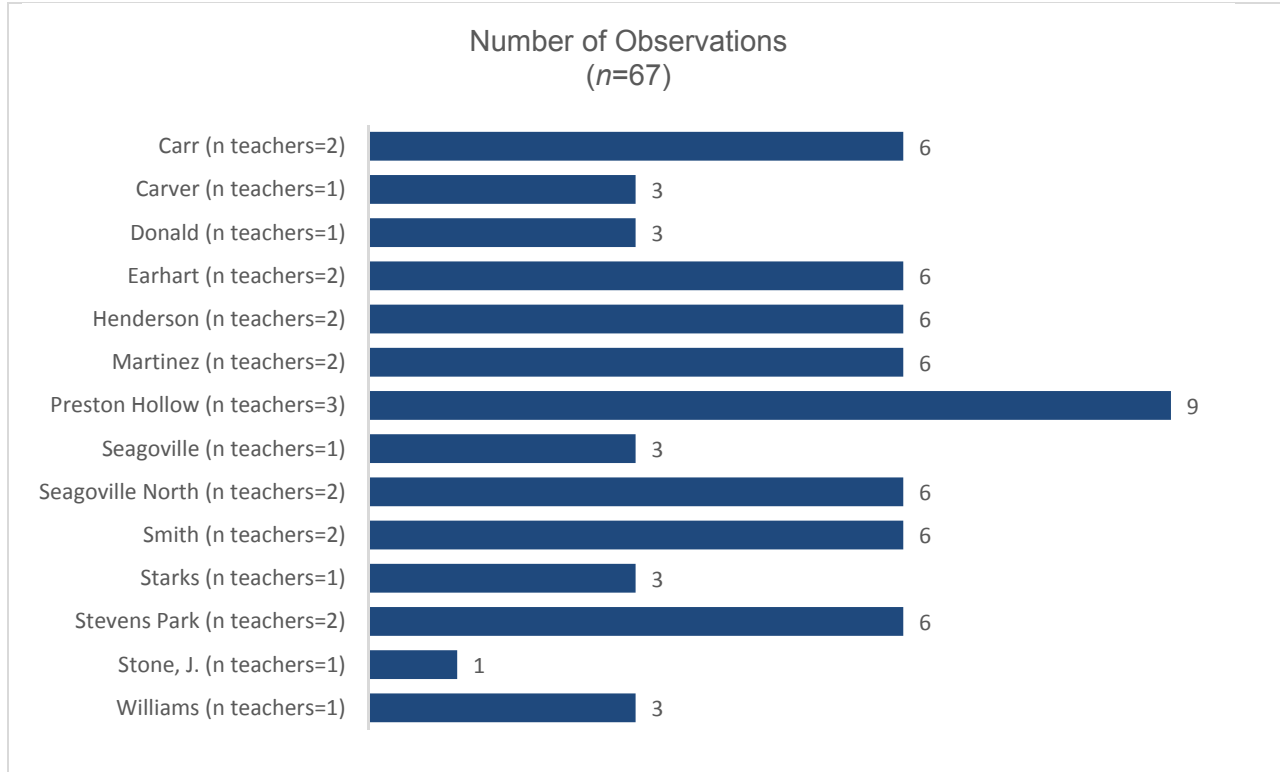
The most frequent comments related to technology issues that sometimes resulted in loss of instructional time ($n=89$). Another 51 noted a need for more or better headphones. Whereas 55 cited good RM implementation, 17 discussed implementation issues. In 14 classes, a small group of students used RM as part of a station (rather than all students using as expected). Other comments varied.

RM Core Program Observations – Grade 5

Twenty-three fifth-grade teachers at 14 campuses were observed at least once; 22 teachers were observed three times, and one teacher was observed once for a total 67 observations. There was a

substitute for the RM teacher at Donald for all three observation windows. In addition, Stevens Park had a substitute during the second observation window, Carr had a substitute during the third observation window, and Henderson had a substitute during the third observation window. Also, one teacher at Seagoville North was not certified in mathematics. The number of fifth-grade observations by school ranged from 1 to 9 (see Figure 20).

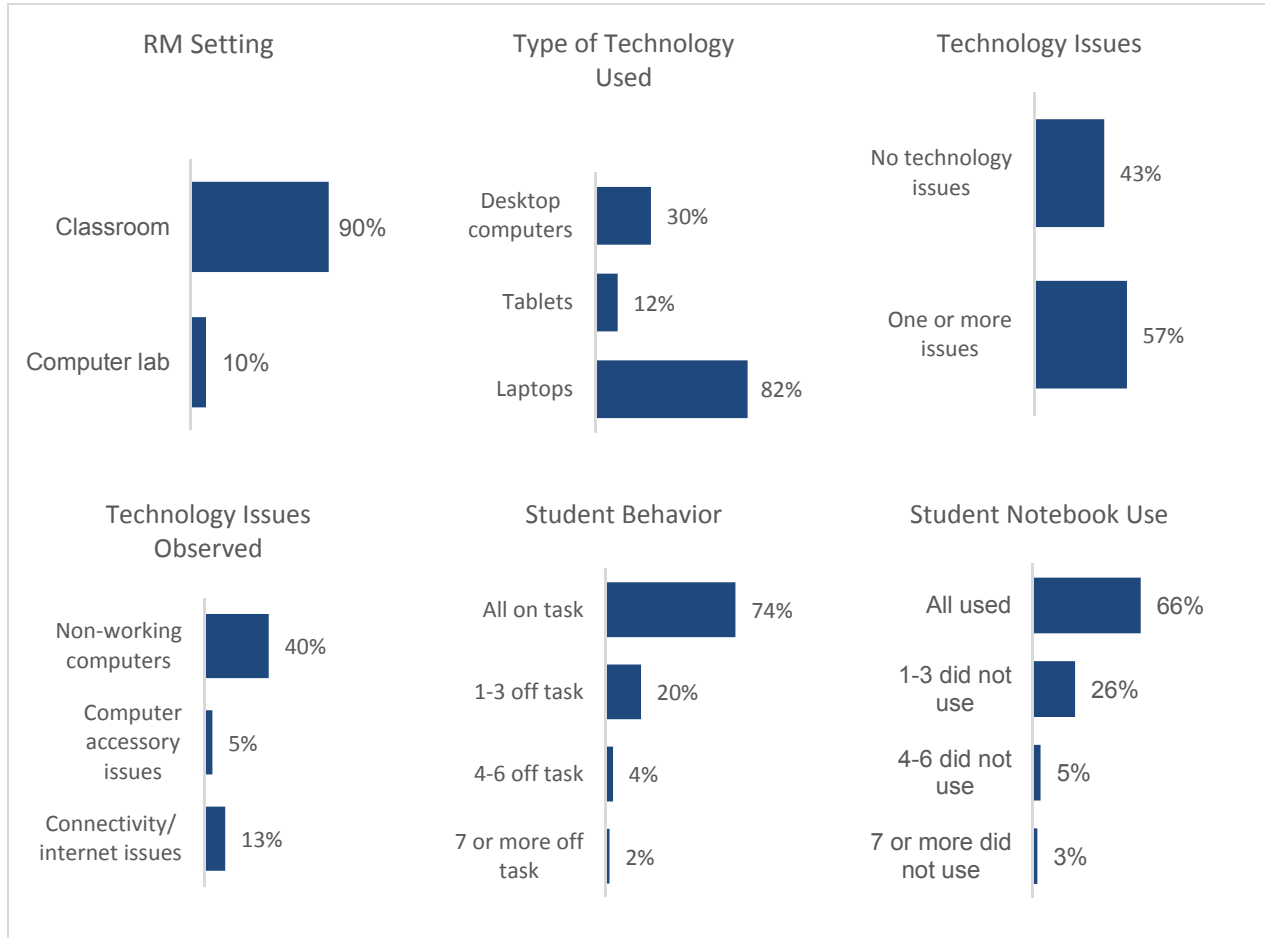
Figure 20: Number of Fifth-Grade Core Curriculum Classrooms Observed by Campus



Note. Each teacher was observed three times with one exception. The teacher at Jill Stone stopped using RM in November (after the first observation), so the teacher was observed once.

As seen in Figure 21, students most often used RM on laptops (82%) in a classroom (90%) setting. Technology issues were observed in 57 percent of observations with the most frequent issue being non-working computers (40%); other issues included connectivity/internet (13%) and computer accessory (5%) problems. Across the time periods observed, all students were on task for about 74 percent of the time; one to three students was off task for a fifth (20%) of the time, and 4 or more were off task the remaining six percent of time. As for notebook use, two-thirds of the students used their notebooks as expected. In about a quarter of the classes observed (26%), one to three students did not use the RM notebook, and four or more did not use their notebook in the remaining 8 percent of observations.

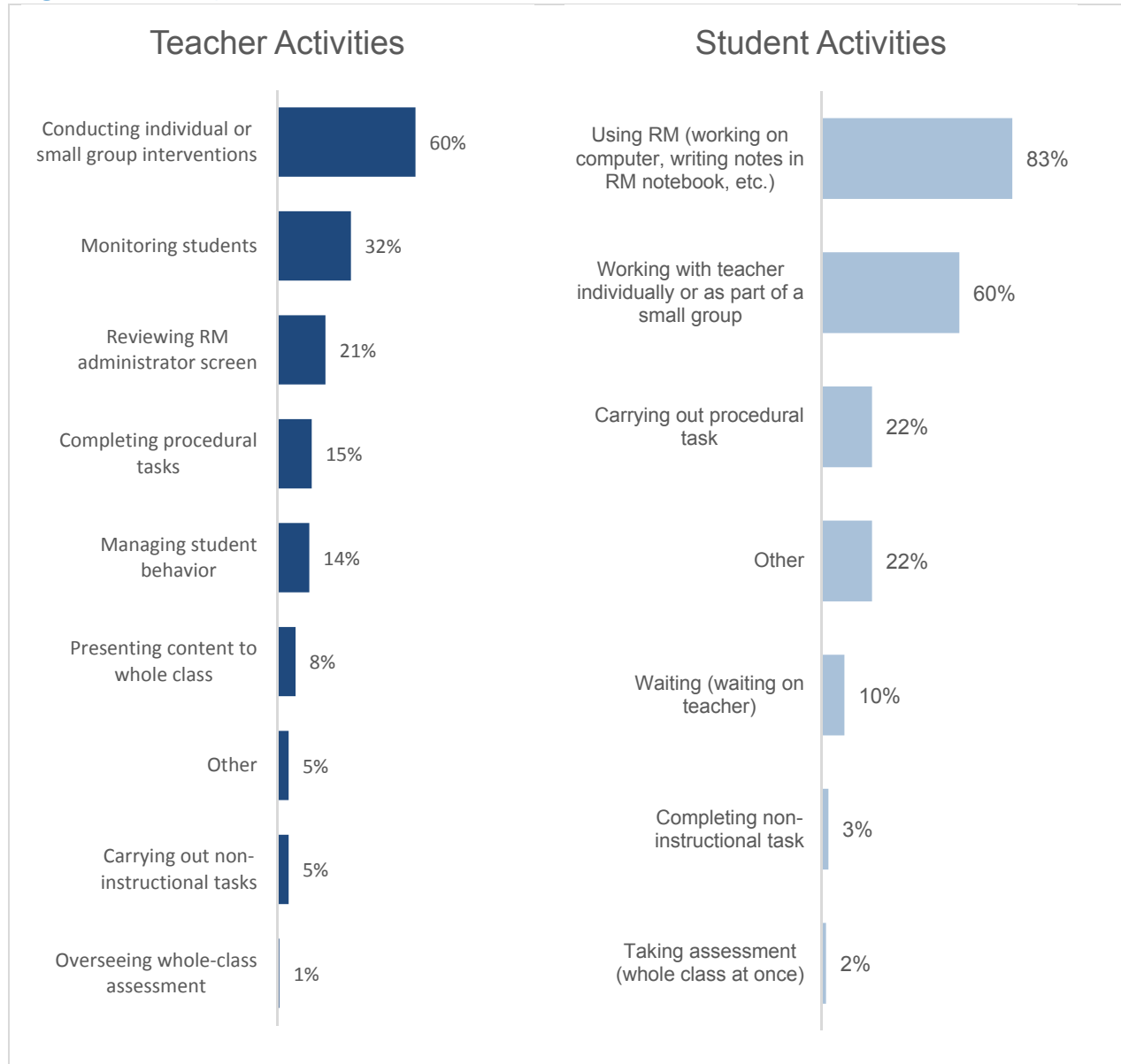
Figure 21: RM Setting, Technology Use, Student Behavior, and Student Notebook Use in Grade 5 Core Curriculum Observations



Note. Percentages do not add to 100 for type of technology used and technology issues observed because more than one option could have been marked. Total classroom observations=67.

Across RM fifth-grade core curriculum observations, teachers allocated the most time to conducting individual or small group interventions (60%) and monitoring students (32%). Students mainly spent the observed time using RM (83%) or working with the teacher individually or in a small group (60% - see Figure 22).

Figure 22: Time Spent on Teacher and Student Activities in Grade 5 Core Curriculum Observations



Note. Percentages do not add to 100 because observers could mark more than one activity. *n* observations=67.

The most-cited comments were the observation of non-RM activities (*n*=29), technology issues (*n*=22), effective classroom procedures (*n*=14), and class awareness of RM progress (*n*=13). Examples of non-RM activities included taking science tests, completing worksheets, working on Assessment of Course Performance²⁰ (ACP) review problems, listening to the teacher, and playing review games. Technology issues most often related to laptops not keeping charge. Although it was positive that teachers helped students know class accuracy, four teachers disseminated accuracy information in a negative way (e.g., called out students with low accuracy rather than discuss classroom accuracy in general).

²⁰ Fall ACPs, district-developed criterion-referenced assessments, were administered at the end of the fall semester.

What were teacher and administrator perceptions of Reasoning Mind?

Methodology

The evaluators conducted interviews with RM staff members in late November and an interview with the district mathematics director in February. RM interviewees included the RM project manager and selected ICs. The purpose of the interviews was to understand communication between RM and district leaders, roles of district and RM staff members involved in RM, changes in the RM support model, resources and support provided, successes, challenges, and suggestions for improvement. Results were analyzed thematically to note similarities and differences across RM and district staff members.

The *Reasoning Mind Campus Administrator Survey* and *Reasoning Mind Teacher Survey* were administered during a three-week window in January 2016: The purpose of the surveys was to find out staff perceptions of RM. Survey items related to overall perceptions of RM, campus communication, district/RM support, RM resources, technology issues, successes, and challenges. Details about survey development including validity and reliability results can be found in the RM 2013-14 final report.²¹

Campus administrators and teachers involved in RM during 2015-16 were sent an email with the survey link along with periodic follow-up reminders. Response rates were 58 percent for campus administrators and 55 percent for teachers. Upon removal of invalid responses, 231 campus administrators and 525 teachers were included in the analyses. Frequency and descriptive analyses were conducted for rating-scale items on the two surveys. Qualitative analyses were used to analyze the open-ended survey items related to successes, challenges, and suggestions for improvement. Responses were categorized into themes and tabulated by group and overall; some open-ended responses included information that fit into more than one theme.

Results

Interview Results

During interviews, the RM project director and district mathematics director noted the relationship between RM and the mathematics department had been strong, especially when planning for Genie Con, whereas RM ICs cited the change to a flexible support model as a success. Project leaders viewed the first-year Genie Con as a success because of positive feedback and because some administrator attendees became more invested in RM. IC interviewees cited the change to the flexible support model (for the supplemental RM teachers) as positive because ICs were able to be more intentional about who they visited, provide more tailored professional development, and coordinate feeder pattern training.

RM and district staff also discussed barriers to implementation. The RM project director noted that limited communication between RM and School Leadership staff continued to be problematic and that the technology roll out for fifth grade was difficult because it was hard to get an accurate list of

²¹ Survey development, reliability, and validity information is described on pages 22 and 68-70 in the 2013-14 Dallas ISD Reasoning Mind final report: <http://www.dallasisd.org/cms/lib/TX01001475/Centricity/domain/98/evaluation/13-14/finalrpts/EA14-512-2-Reasoning-Mind-Program-Final.pdf>.

teachers that would be using RM in 2015-16. The district mathematics director felt the main challenge was not knowing with certainty if RM was working or not. IC interviewees cited several challenges.

- High district teacher turnover was problematic due to the wait time for teachers to complete the QC before using RM with their students along with struggles typical of first-year teachers.
- Teacher schedules changed frequently but were not communicated to the ICs. This led to limited campus support for some. ICs noted that equity in campus support would improve greatly if schedule changes were promptly communicated.
- The ICs were concerned that fewer teachers were participating in professional development than in the past. They also emphasized that the teachers that took the QC online did not benefit as much as those that attended in person. They further mentioned the need for more teachers to participate in one of the face-to-face QCs prior to the start of the school year if at all possible.
- The ICs assigned to fifth-grade teachers noted that the lack of alignment between the RM curriculum and the fall *ACP* continued to be an issue; to help the fifth-grade RM teachers, they worked hard to communicate which Texas Essential Knowledge and Skills would *not* be covered in RM prior to the fall assessment.
- Technology problems continued for some campuses. Specific problems mentioned included (a) not having enough technology in the Roosevelt feeder pattern for part of the first semester and (b) Dell Vostro computers not holding their charge. Also, the ICs noted that some teachers were not submitting tickets to Information Technology, so problems persisted longer than necessary.

Campus Survey Results - Overall Perceptions of RM

Responses of 231 campus administrators and 525 teachers were included in analyses. Of the 231 administrators, 94 (41%) were campus instructional coaches, 83 (36%) were principals, 51 (22%) were assistant principals, and 3 (1%) were "Other." Fifty-seven percent indicated the primary RM campus administrator contact was a campus instructional coach; others reported the contact as the principal (24%), assistant principal (15%), or other staff member (4%). As seen in Table 2, most teacher respondents had used RM one to two semesters (39%) or three to four semesters (21%).

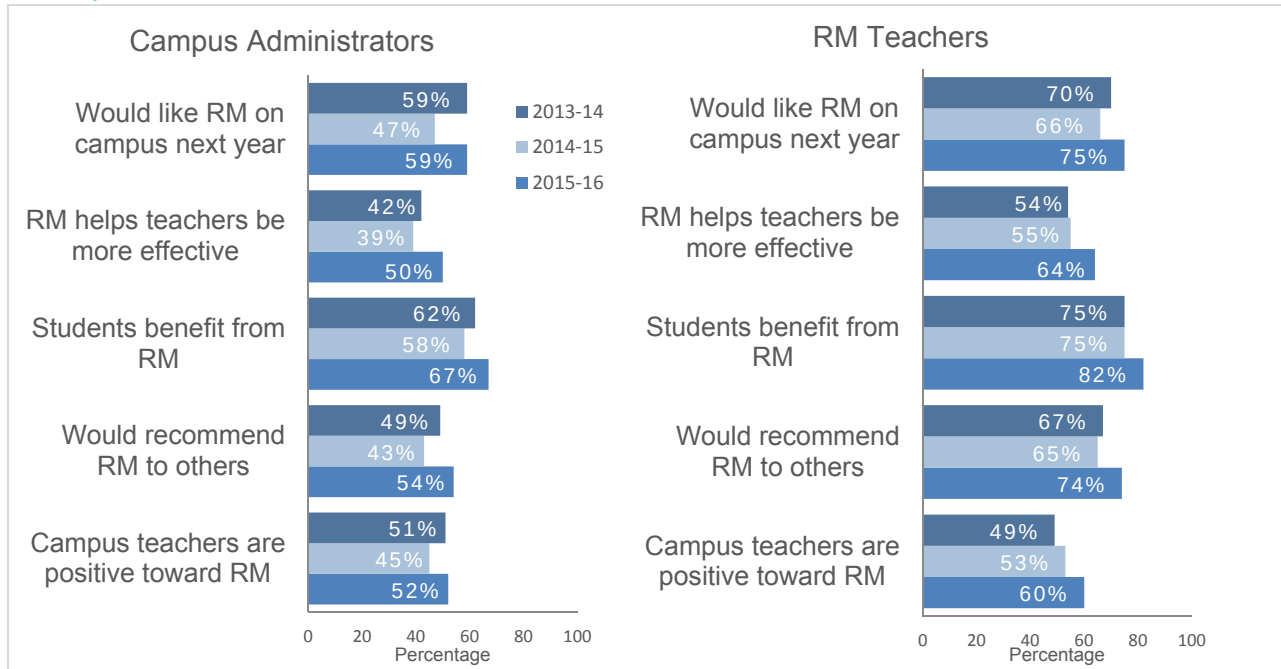
Table 2: Spring 2016 Campus Staff Survey Respondent Characteristics

Group	Administrators n (%)	Teachers n (%)
Schools Represented	135 (93)	140 (96)
Grade Level		
Second only	-	241 (46)
Third only	-	183 (35)
Fourth only	-	67 (13)
Fifth only	-	14 (2)
Combination	-	20 (4)
Number of Semesters Used RM		
1-2	-	207 (39)
3-4	-	111 (21)
5-6	-	108 (21)
7-8 semesters	-	58 (11)
9 or more	-	41 (8)

Note. Valid responses were received from 231 campus administrators and 525 teachers. The number of schools that enrolled students in RM during 2015-16 was 146.

Like past years, teachers were more positive than administrators on the overall survey items (see Figure 23, Appendix I, and Appendix J). Also, like previous years, teachers (82%) and administrators (67%) were most positive toward the benefit of RM on students. Positive responses to overall items were higher in Spring 2016 than in Spring 2015. Although less than half of administrators gave positive responses to four of the five overall items in 2015, 50 to 67 percent did so for all five items in 2016.

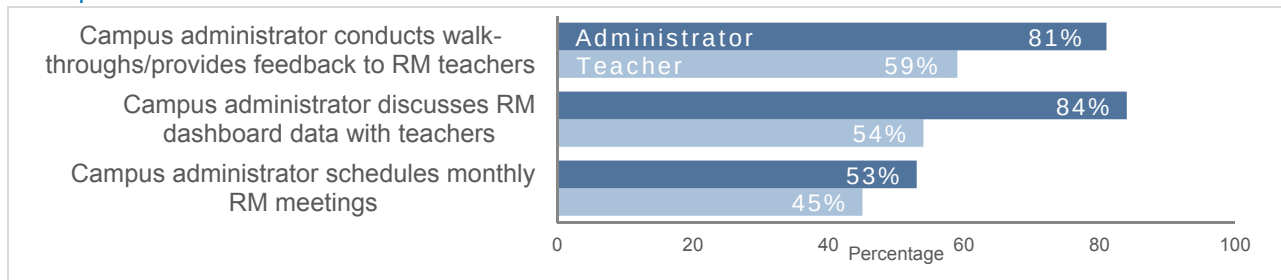
Figure 23: Percentage of Campus Staff Members that “Agreed” or “Strongly Agreed” with Overall Survey Items



Campus Survey Results - Campus Staff Communication

Campus administrators gave more positive responses than RM teachers on the three campus-level communication items (see Figure 24). Less than half of teachers (45%) “agreed” or “strongly agreed” that campus administrators scheduled monthly RM meetings.

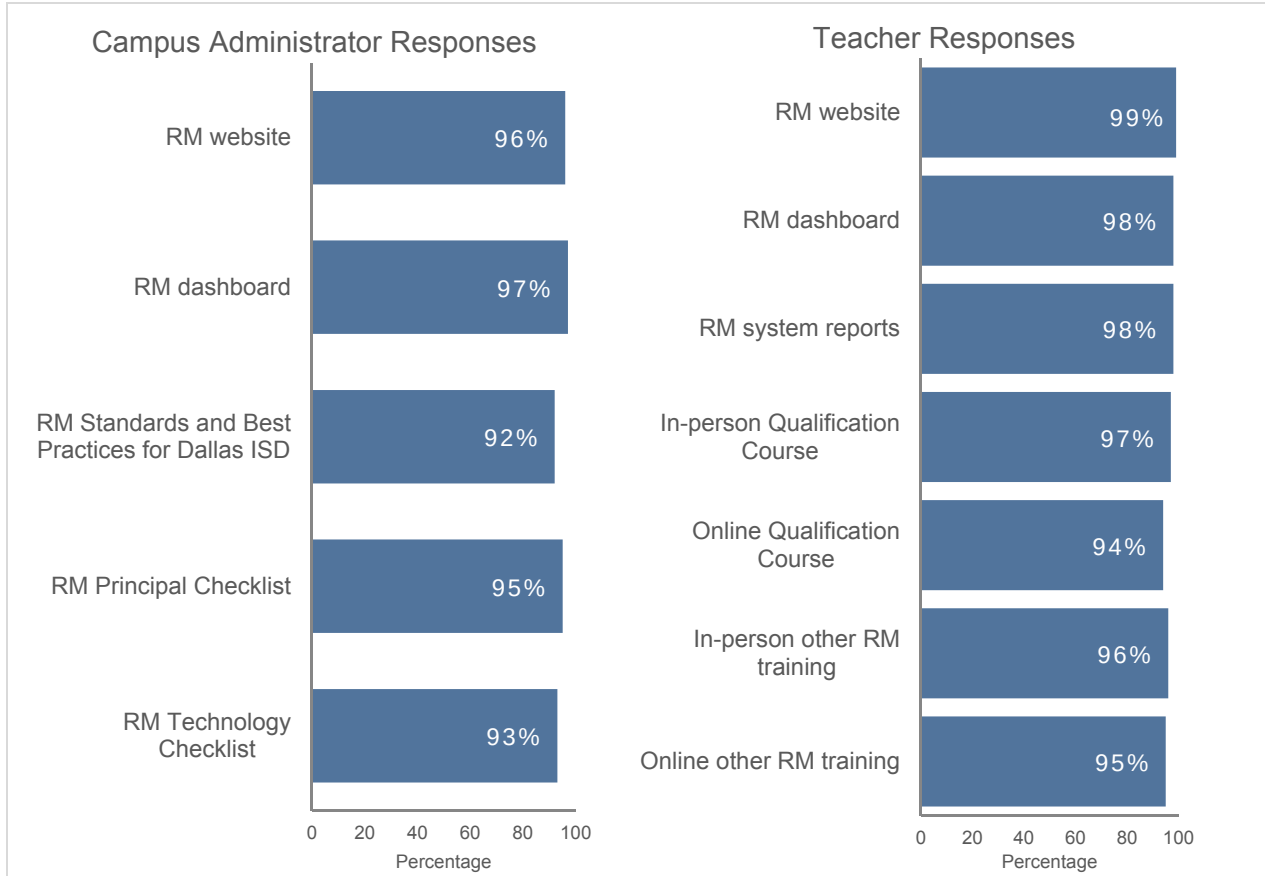
Figure 24: Percentage of Campus Staff Members that “Agreed” or “Strongly Agreed” with RM Campus Staff Communication Items



Campus Survey Results - Helpfulness of RM Resources and Training

As seen in Figure 25, 92 percent or more of campus administrators and teachers viewed all RM resources as “very helpful” or “somewhat helpful.”

Figure 25: Percentage of Campus Staff Members that Marked “Very Helpful” or “Somewhat Helpful” for RM Resources and Training

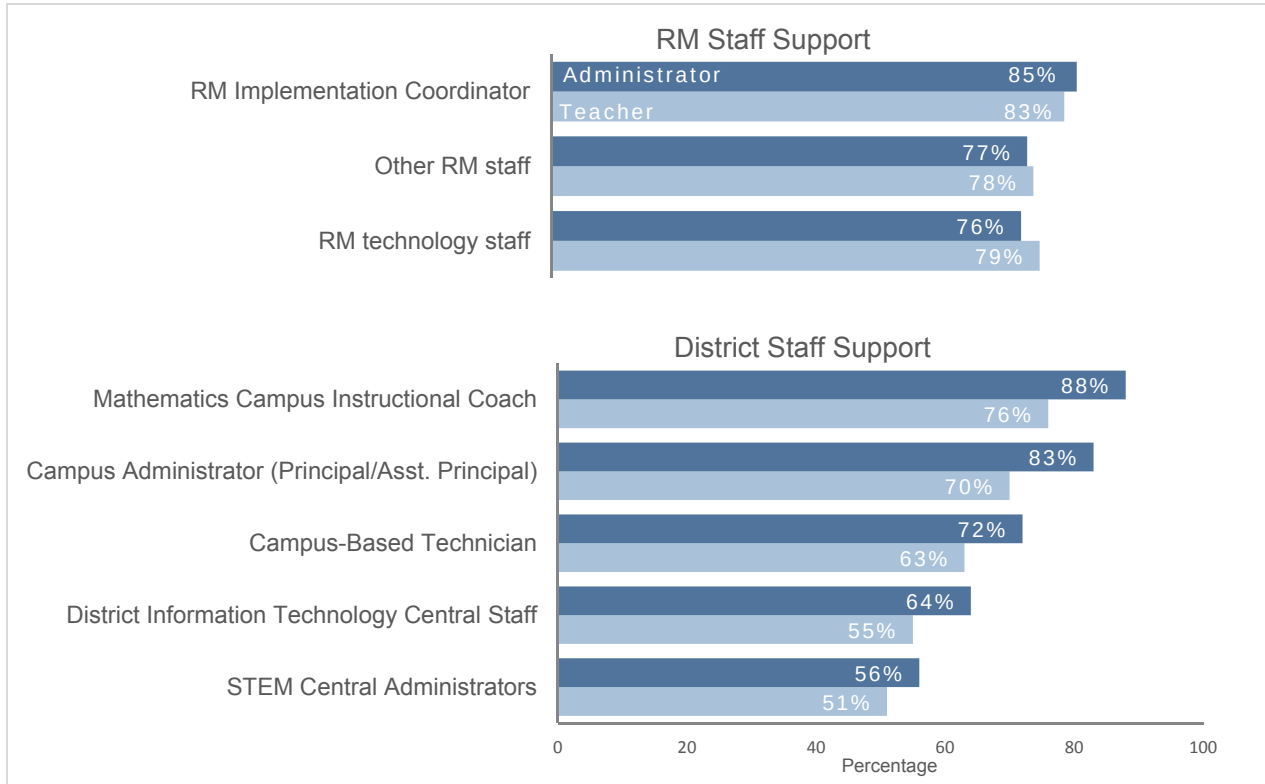


Note. Participants that marked “did not use/attend” were excluded.

Campus Survey Results - RM and District Staff Support

The majority of campus administrators (76% to 85%) and teachers (78% to 83%) responded that they were “satisfied” or “extremely satisfied” with support from RM staff (see Figure 26). Campus administrators (56% to 88%) were more positive than teachers (51% to 76%) about support from district staff members.

Figure 26: Percentage of Campus Staff Members that Were “Satisfied” or “Extremely Satisfied” with RM and District Staff Support

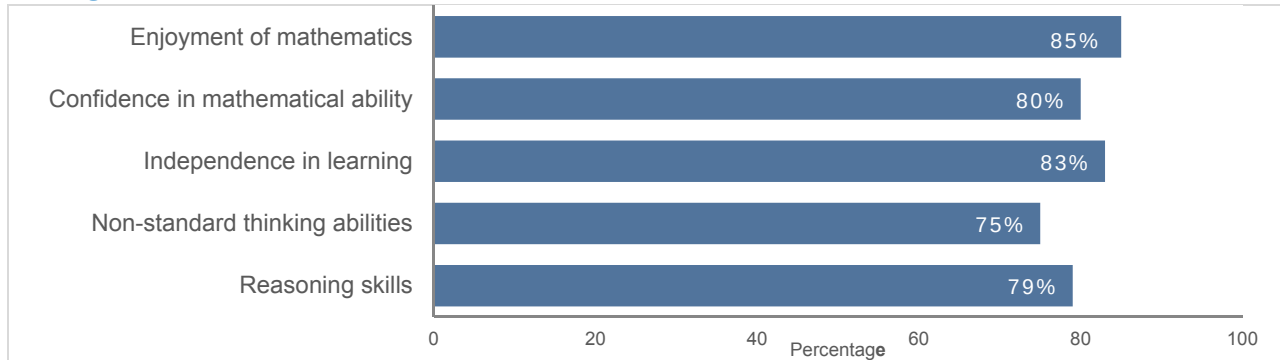


Note. Participants that marked “not applicable” were excluded.

Campus Survey Results - Student Change Indicators

The majority of teachers indicated that students had “improved” or “significantly improved” in the five academic-related change areas queried (75% to 85% - see Figure 27).

Figure 27: Percentage of Teachers that Marked “Improved” or “Significantly Improved” for Student Change Items

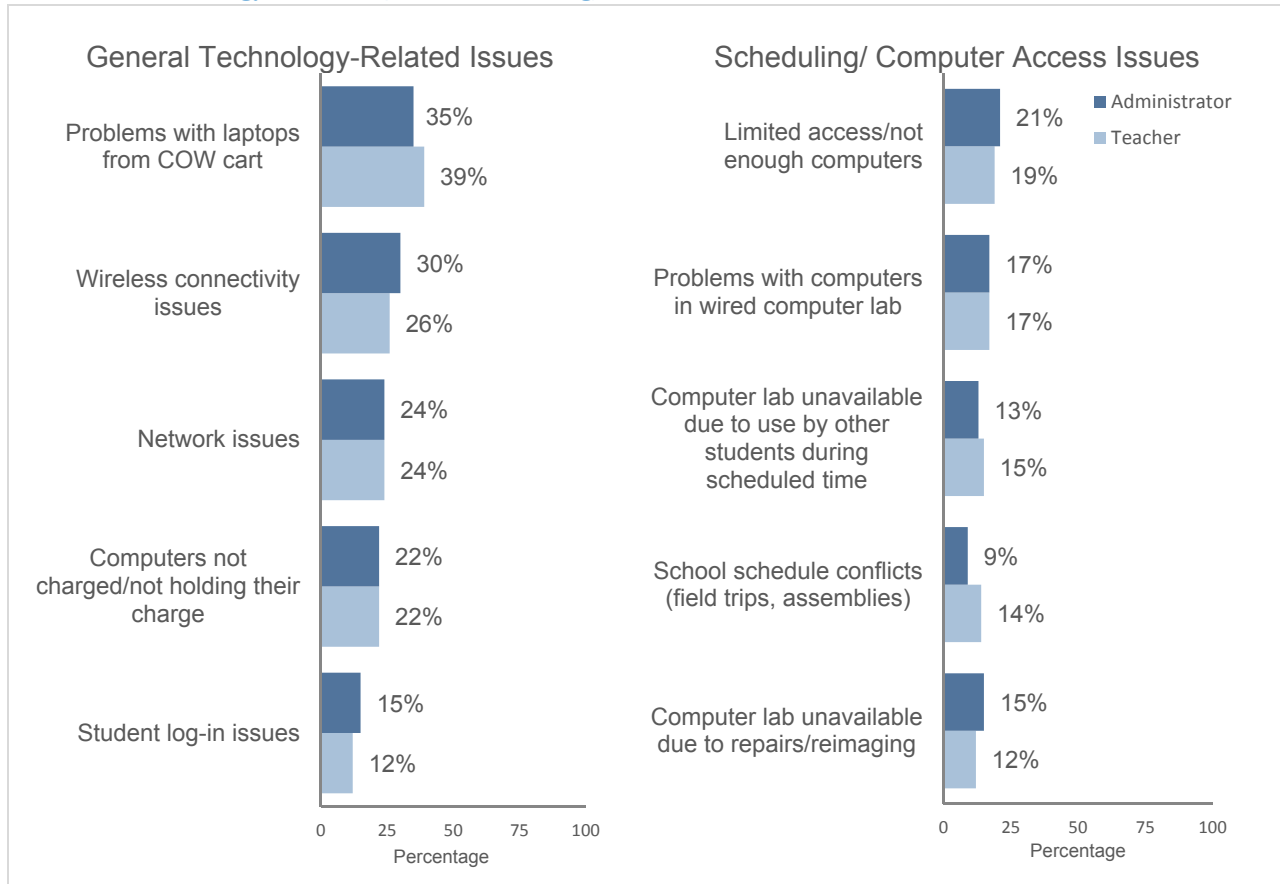


Note. Participants that marked “do not know” were excluded.

Campus Survey Results - Technology-Related Issues and Computer Scheduling/Access Issues

Some campus staff members indicated that technology-related issues continued to “frequently” or “very frequently” occur. A quarter or more reported frequent issues with laptops from Computers on Wheels (COW) carts (35% for campus administrators and 39% for teachers), wireless connectivity (30% and 26%, respectively), and network issues (24% for both groups). About a fifth of campus respondents (17% to 21%) reported that students had limited access to computers or experienced problems with computers in a wired lab (see Figure 28).

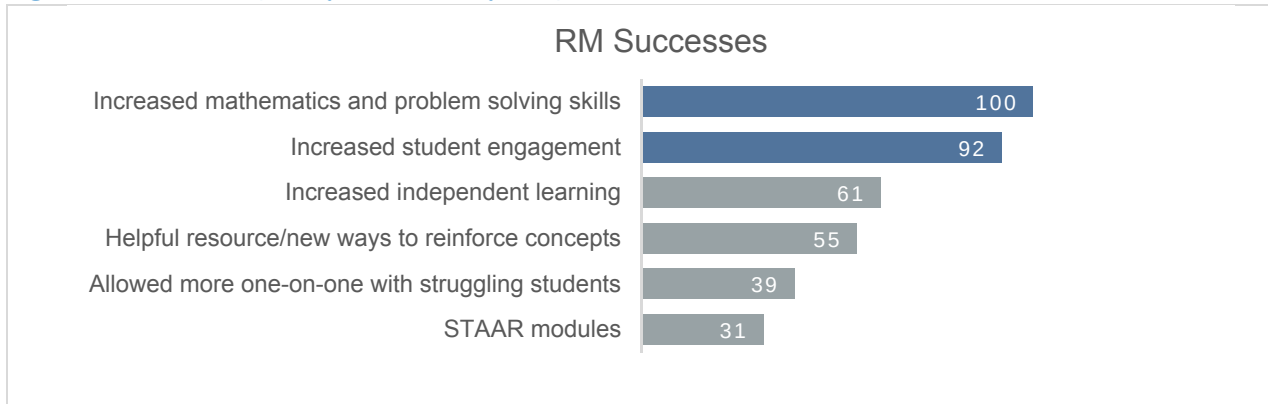
Figure 28: Percentage of Campus Staff Members that Chose “Frequently” or “Very Frequently” for General Technology and Computer Scheduling/Access Issues



Campus Survey Results – Successes

As seen in Figure 29 and Appendix K, the most-noted successes were improved student mathematics and problem solving skills ($n=100$) as well as student engagement ($n=92$). Some also indicated that RM helped students become more independent in their learning ($n=61$). Another 55 believed RM was a useful resource and provided new ways to reinforce concepts.

Figure 29: Most Frequently-Cited Survey Responses for Successes



Campus Survey Results – Challenges and Suggestions for Improvement

Challenges to RM implementation. Technology-related issues ($n=197$) and difficulty meeting RM time requirements ($n=180$) were the most-cited survey challenges (see Figure 30 and Appendix K).

- *Inadequate working technology/access/support ($n=197$).* Per survey respondents, technology issues continued to be problematic. For some, inadequate technology precluded students from being able to log all of the expected hours. In other cases, the teacher was pulled away from working with students on mathematics instruction to trouble shoot technology problems.
- *Difficulty meeting time requirements ($n=180$).* Respondents' most-cited reasons for not meeting time expectations were inadequate technology and/or lack of alignment between district and RM curricula. The lack of alignment has become more pronounced with the district's new teacher evaluation system (Teacher Excellence Initiative).²² Whereas the district curriculum is directly aligned with the local and state assessment measures included in the Teacher Excellence Initiative, the RM curriculum is not.²³ As a result, several respondents mentioned that using RM takes time away from covering the district-mandated curriculum. The lack of alignment between RM and district curricula is especially concerning for fifth grade because RM is expected to serve as the full, core curriculum.

Suggestions to improve RM implementation. As seen in Figure 30 and Appendix K, the two main suggestions for improvement were increasing access to working technology ($n=105$) and aligning district and RM curricula ($n=75$). Another 37 suggested reducing RM time requirements; 32 proposed no longer making RM mandatory and/or using a resource more aligned to the district curriculum.

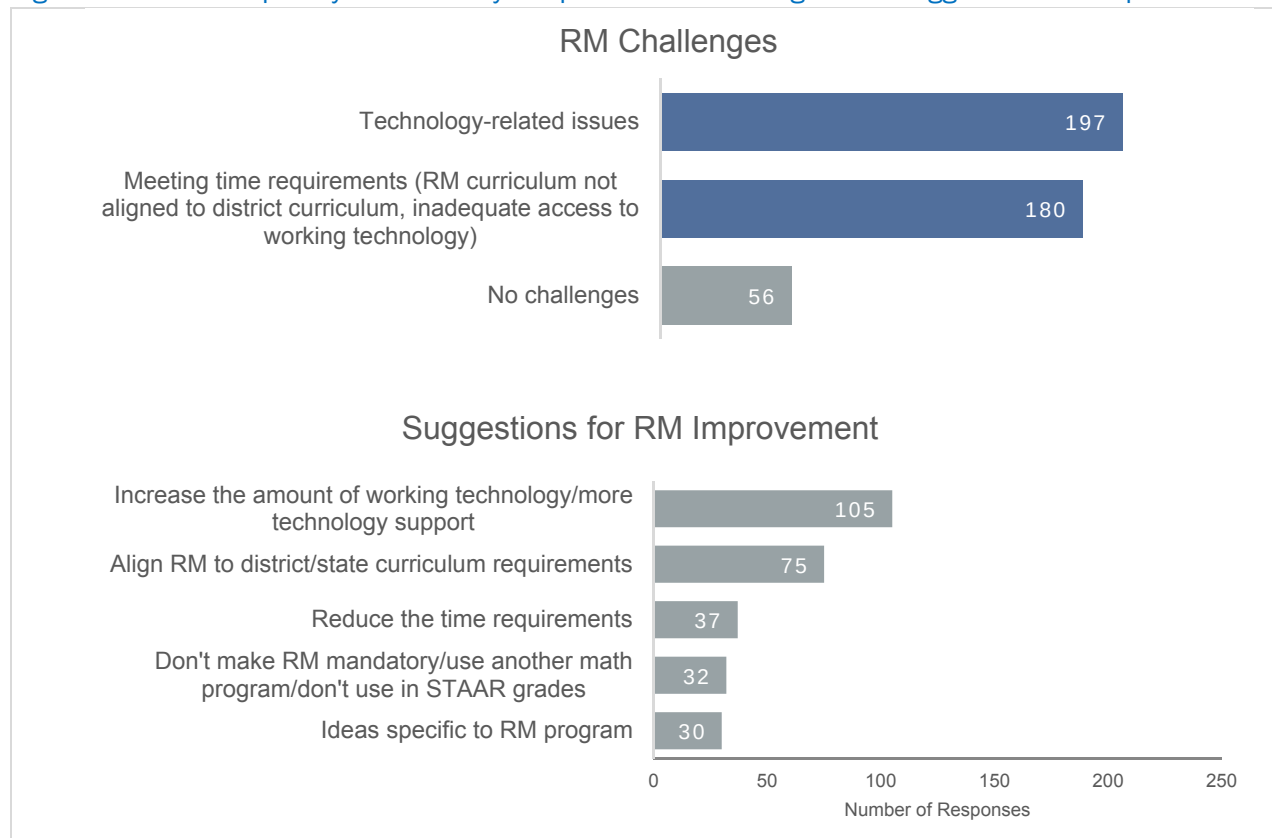
- *Increase access to working technology and provide more technology support ($n=105$).* Several suggested increasing the amount of working technology, consistently updating technology, and ensuring adequate technology support.

²² Through the Teacher Excellence Initiative, teachers are evaluated based on performance, student achievement and student experience surveys.

²³ Respondents cited two main differences between district and RM curricula: the order concepts are introduced and the vocabulary used (e.g., different terminology). Also, per survey comments, teachers cannot reorder concepts that are part of the RM curriculum to match the order concepts are covered in the district curriculum.

- *Align district and RM curricula (n=75).* Some survey respondents suggested that the two curricula be aligned. For example, a few noted the need to use the same terminology. Others suggested that the order RM covers concepts be the same as the district curriculum and/or allowing more flexible use of RM (e.g., being able to pick what objectives students cover). Yet others felt it was unfair to cover two curricula when they were held accountable for the district curriculum as part of the Teacher Excellence Initiative. Based on interviews with RM, however, except for *State of Texas Assessments of Academic Readiness (STAAR)* modules, it is not possible for RM objectives to be reordered or for teachers to flexibly choose objectives. As recommended in previous evaluation reports, teachers need much more guidance on how to meld two different curricula.
- *Reduce RM time requirements (n=37).* Staff survey respondents gave two main reasons for reducing the time requirement: technology issues and/or the lack of alignment between district and RM curricula. Another 32 suggested not requiring RM at all and/or moving to other mathematics resources that were better aligned to district curriculum.

Figure 30: Most Frequently-Cited Survey Responses for Challenges and Suggestions for Improvement



What were student mathematics achievement outcomes?

Methodology

Outcome analyses were conducted to determine how RM students performed on spring mathematics assessments. Data from RM files, PEIMS files, and mathematics achievement files were merged to prepare for analyses. Assessments included *TerraNova*,²⁴ *Iowa Assessments (Iowa)*, and *State of Texas Assessments of Academic Readiness*²⁵ (*STAAR*). Descriptions follow.

- *TerraNova* is a nationally normed achievement battery that was administered for the first time in Spring 2016 in grades kindergarten to two. In previous years, students in grades kindergarten to two completed *Iowa*, also a norm-referenced achievement battery. Normal curve equivalent (NCE) scores were used in descriptive, correlation, and regression analyses. National percentiles (NP) were used to determine the percentage of students that met the grade-level standards; students at or above the fortieth percentile are considered performing at grade level.
- The state's criterion-referenced assessment, *STAAR*, is administered each spring. Crosstab analyses were used to determine the percentage of students in grades three to five that met the 2015-16 Level II Satisfactory standard. Scale scores for students in grades three to five were used in descriptive, correlation, and regression analyses.

Descriptive, Frequency, and Correlation Analyses

Descriptive analyses were carried out to determine minimum, maximum, and mean scores (*TerraNova* NCE scores for second grade and *STAAR* scale scores for grades three to five), and frequency analyses were conducted to find out the percentage of students that met grade-level standards; analyses were conducted overall and by subgroup for each grade level. Pearson product correlation coefficients (r) were computed to note the strength of relationships between students' assessment scores and RM indicators (hours online, objectives completed, and Guided Study Level A accuracy). Crosstab analyses were used to further examine the relationship between time, accuracy, and student achievement.

Regression Analyses

Multiple regression analyses were conducted for each grade level to determine which RM variables best predicted students' spring achievement scores (*TerraNova* NCE scores for second grade and *STAAR* scale scores for grades three to five). Variables included (1) number of objectives completed, (2) accuracy rates of Guided Study Level A problems, (3) prior achievement (2015 *Iowa* NCE scores for

²⁴ Data reported as of 6/9/16. Updates received after 6/9/16 are not reflected in this report.

²⁵ Data reported as of 7/11/16. Updates received after 7/11/16 are not reflected in this report.

second and third grade and 2015 *STAAR* scale scores for fourth and fifth grades), (4) economically disadvantaged status, (5) gender, and (6) ethnicity.²⁶

Fourth- and Fifth-Grade Analyses

For fourth- and fifth-grade, additional multiple regression analyses were carried out to determine if there were statistically significant differences between RM and non-RM comparison group students. All fourth graders (RM and non-RM students) were used in fourth-grade analyses, whereas propensity score matching (PSM) was used to create a matched comparison group of non-RM fifth-grade students (see Appendix L for detailed methodology).²⁷

Limitations of Outcome Analyses

There were three main limitations of the analyses. First, achievement results could not be attributed solely to RM due to (a) the inability to create a comparison group for grades two and three and (b) the district's use of RM as supplemental to regular instruction in grades two to four (e.g., it is not possible to know how much achievement results should be attributed to RM and how much they should be credited to teacher instruction based on district curriculum). Second, district implementation fidelity continued to be a confounding factor as a sizeable proportion of students in all grades did not meet RM expectations for implementation. Third, there was possible selection bias between treatment and comparison groups for grade four.²⁸

Results

Descriptive Statistics for RM Student Spring Mathematics Performance

As seen in Table 3, overall mean assessment scores for RM students were close to the district mean for grades two, three and five (mean differences ranged from 0.1 to 0.9). The mean difference in scale scores for fourth grade was 3.1 (RM students lower than the district). When reviewed by subgroup, mean scale scores for African American students were lower than for other groups, and White mean scores were higher. Results by feeder pattern can be found in Appendix M.

²⁶ Evaluators replicated the regression model used by Waxman & Houston (2012). Time was excluded due to high correlation between total hours and number of objectives completed (potential multicollinearity and low statistical power - Bobko, 2001). Dummy variables were used for economically disadvantaged status, gender, and ethnicity.

²⁷ PSM was not used with fourth grade because the pool for matching was not large enough; that is, about half of the fourth graders were in RM, and half were not. The fifth-grade matched comparison group was comprised of non-RM fifth-grade students in the district that had the same probability of being in RM as RM students. This procedure mimics random assignment as used in an experimental design.

²⁸ It is unknown how principal decision to opt in or out of using RM affected the treatment and comparison groups.

Table 3: Spring 2016 Mathematics *TerraNova* and *STAAR* Descriptive Statistics

Group	RM Students					District				
	<i>n</i>	Range	Mean	<i>SD</i>	% Passing	<i>n</i>	Range	Mean	<i>SD</i>	% Passing
Second Grade (<i>TerraNova</i> NCE Scores)										
<i>TerraNova</i>										
All	12,269	1-99	47.4	20.0	57.7	12,498	1-99	47.5	20.1	57.8
White	601	2-99	62.7	20.0	81.5	665	2-99	62.8	19.7	82.1
African American	2,676	1-99	42.7	20.3	48.2	2,727	1-99	42.7	20.3	48.3
Hispanic	8,733	1-99	47.7	19.3	58.8	8,827	1-99	47.7	19.4	58.7
Eco. Dis.	11,234	1-99	46.6	19.6	56.4	11,369	1-99	46.6	19.6	56.3
Special Education	572	1-99	31.5	21.0	28.1	596	1-99	31.7	21.3	28.4
ELL	6,126	1-99	45.9	19.1	55.5	6,166	1-99	45.9	19.2	55.3
Third Grade (<i>STAAR</i> Scale Scores)										
<i>STAAR</i>										
All	12,234	772-1918	1424.5	137.1	65.7	12,483	772-1918	1425.4	137.6	66.0
White	533	1162-1918	1508.2	158.7	81.4	590	1162-1918	1509.8	156.8	82.0
African American	2,658	1098-1918	1374.6	127.2	50.1	2,697	772-1918	1375.8	128.7	50.4
Hispanic	8,826	772-1918	1433.6	133.6	69.3	8,965	772-1918	1433.9	133.7	69.4
Eco. Dis.	11,234	772-1918	1420.1	134.5	64.8	11,397	772-1918	1420.6	134.9	65.0
Special Education	603	1069-1918	1322.8	121.2	30.7	619	1069-1918	1323.2	123.9	30.7
ELL	6,256	772-1918	1430.2	132.7	68.7	6,326	772-1918	1430.2	133.2	68.7
Fourth Grade (<i>STAAR</i> Scale Scores)										
<i>STAAR</i>										
All	5,881	868-2068	1515.2	140.5	63.3	11,832	868-2068	1518.3	139.4	64.3
White	225	1080-1935	1597.1	158.7	79.6	549	1080-2068	1604.8	158.5	81.8
African American	1,405	1192-1935	1462.1	126.9	47.3	2,674	1192-2068	1465.1	125.1	48.4
Hispanic	4,126	868-2068	1527.9	138.3	67.6	8,380	868-2068	1528.4	136.3	67.9
Eco. Dis.	5,451	868-2068	1512.2	138.7	62.6	10,828	868-2068	1513.6	136.4	63.3
Special Education	370	1192-1855	1396.7	116.6	25.4	723	1192-2068	1406.4	119.5	26.6
ELL	3,061	868-2068	1528.6	134.5	68.4	6,061	868-2068	1527.5	133.9	68.0
Fifth Grade (<i>STAAR</i> Scale Scores)										
<i>STAAR</i>										
All	780	1251-2091	1573.0	135.1	69.6	11,483	931-2091	1573.9	135.9	69.6
White	28	1251-1833	1595.5	153.1	67.9	525	1251-2091	1671.7	152.7	86.9
African American	116	1251-1959	1509.2	139.0	46.6	2,513	1189-2091	1517.2	118.0	53.6
Hispanic	626	1274-2091	1581.6	128.8	73.5	8,232	931-2091	1583.7	132.5	73.3
Eco. Dis.	729	1251-2091	1571.7	134.8	69.0	10,508	931-2091	1569.0	132.3	68.9
Special Education	54	1274-1833	1451.6	120.5	31.5	750	1189-1881	1459.3	110.2	31.6
ELL	441	1274-1959	1575.1	123.3	72.8	6,003	1223-2091	1579.2	131.0	72.2

Note. *SD*=standard deviation. Eco. Dis.=economically disadvantaged. ELL=English language learner. Results by feeder pattern can be found in Appendix M. For *STAAR* data, *STAAR* Alternative 2 version was excluded from the analyses.

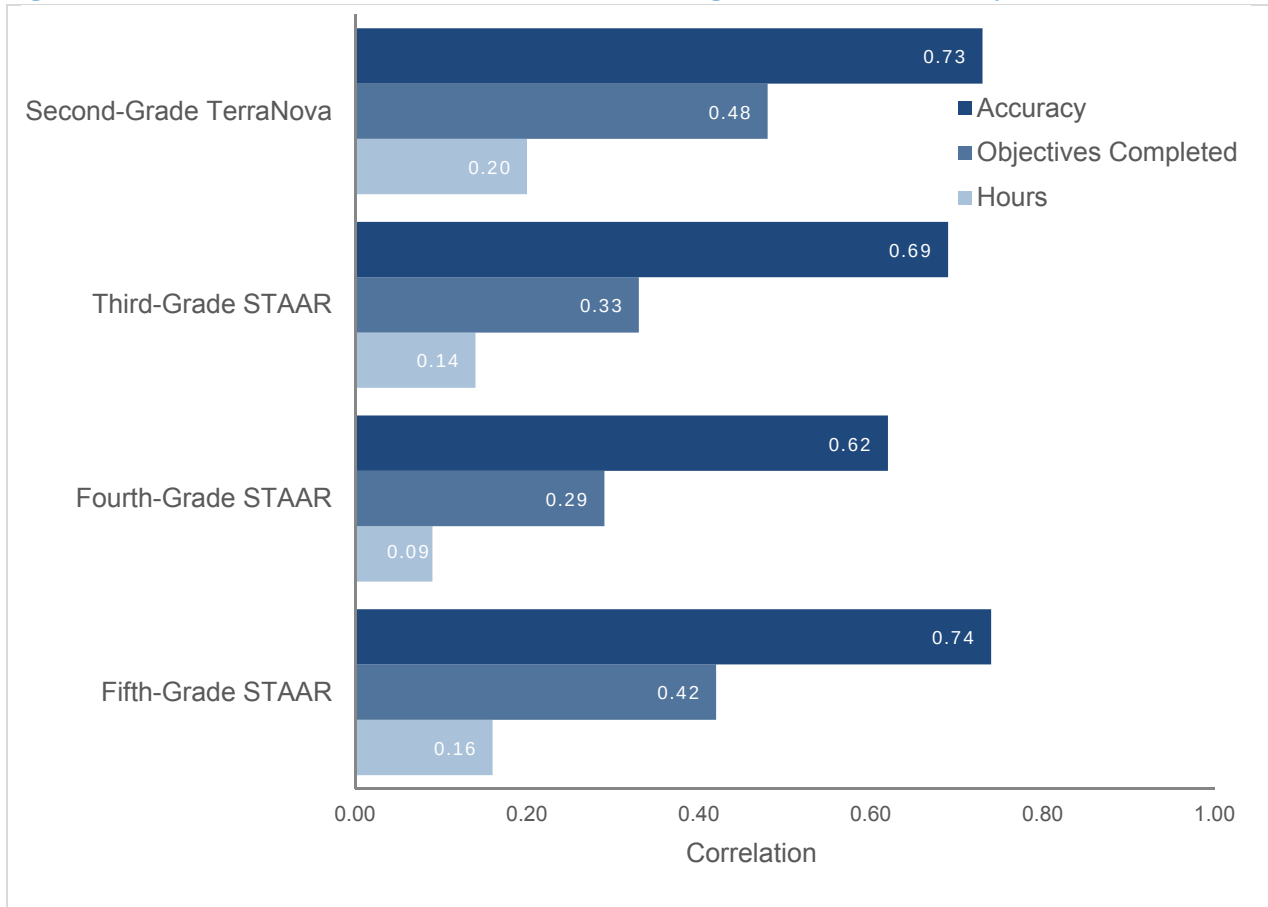
Source. PEIMS district data base: 10/30/15. *TerraNova*: 6/9/16. *STAAR*: 7/11/16.

Correlations between RM Components and Spring Assessment Scores

Like last year (Bush and Kim, August 2015), students' mathematics scores were highly correlated with accuracy ($r=0.73$, 0.69 , 0.62 , and 0.74 for second-, third-, fourth-, and fifth-grade, respectively - see Figure 31).²⁹ Correlations between objectives completed and assessment scores were in the middle (0.29 to 0.48). The correlation coefficients between hours online and test scores were small (0.09 to 0.20).

²⁹ n for second grade=12,269, 12,111, and 12,269 for hours, objectives completed, and accuracy, respectively; n for third grade=12,234, 12,088, and 12,234; n for fourth grade=5,881, 4,552, and 5,824; n for fifth grade=780 for each. Absolute values for r correlations of $.1$, $.3$, and $.5$ are considered to be small, medium, and large, respectively (Cohen, 1988).

Figure 31: Correlations between RM Indicators and Spring Assessment Scores by Grade

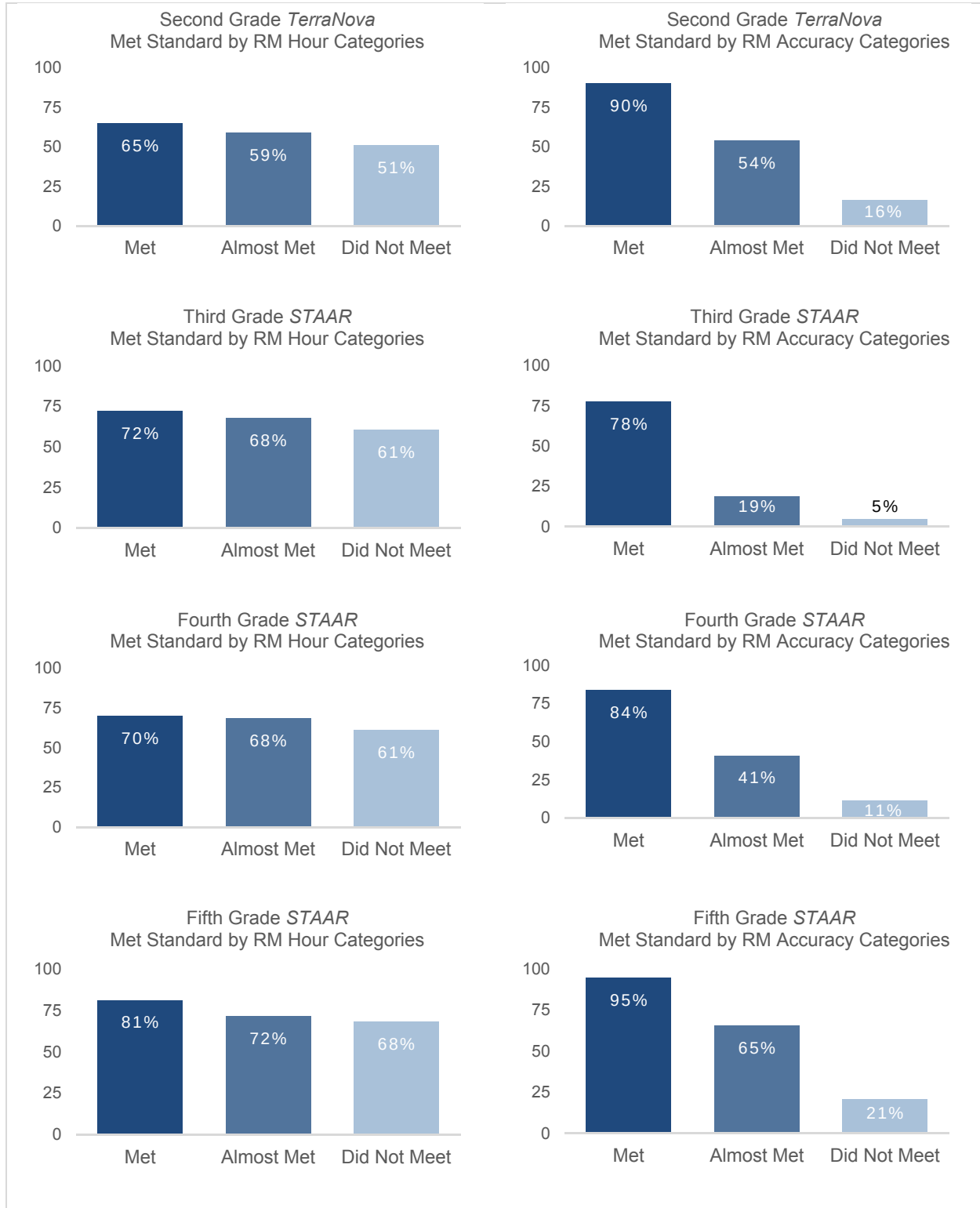


Note. Accuracy= RM Guided Study Level A Accuracy. *TerraNova* data reported as of 6/9/16. *STAAR* data reported as of 7/11/16.

Comparisons of Mathematics Achievement by RM Hour and Accuracy Target Categories

Across grade levels and assessments, RM students that “met” the accuracy target noticeably outperformed students that “almost met” or “did not meet” the target (see Figure 32 and Appendix N). Students that “met” the hour target tended to have slightly higher test scores than students in the “almost met” and “did not meet” categories; however, the differences were not as pronounced as those for accuracy. Results were consistent with 2014-15 evaluation findings (Bush and Kim, August 2015).

Figure 32: Percentage of Students that Met Grade-Level Assessment Standards in Spring 2016 by RM Hour^a and Accuracy^b Categories



Note. "Met Standard" was the 40th percentile or higher for *TerraNova* (as of 6/9/16) and 2015-16 Level II Satisfactory for *STAAR* (as of 7/11/16). ^a Met=Logged 100 percent of expected hours. Almost Met=Logged 80 to 99 percent of expected hours. Did Not Meet=Logged less than 80 percent of expected hours. ^b Met=Attained Guided Study Level A accuracy rate of 75 percent or higher. Almost Met=Accuracy rate between 60 and 74 percent. Did Not Meet=Accuracy rate of less than 60 percent.

Multiple Regression Results

Predictors of Spring Assessment Scores. Like last year (Bush and Kim, August 2015), multiple regression results showed that RM accuracy, prior achievement, and RM objectives completed were major predictors of second- through fifth-grade students' *TerraNova*/STAAR scores (see Table 4 and Appendix O). Grade-level regression results follow.

- For second grade, there were three major predictors: accuracy ($\beta=.47$, $p<.001$), objectives completed ($\beta=.17$, $p<.001$), and prior achievement ($\beta=.31$, $p<.001$). When all variables were accounted for in the model, economically disadvantaged status, gender, and ethnicity were statistically significant predictors.³⁰ The eight predictors explained about 63 percent of the variance of the *TerraNova* scores ($R^2=.632$, $F[8, 11,229]=2,410.96$, $p<.001$).
- Third-grade results showed three major predictors: accuracy ($\beta=.40$, $p<.001$), number of objectives completed ($\beta=.12$, $p<.001$), and prior achievement ($\beta=.41$, $p<.001$). When all variables were accounted for, economically disadvantaged status, gender, and ethnicity were statistically significant predictors.³¹ The eight predictors explained about 62 percent of the variance of the STAAR scores ($R^2=.622$, $F[8, 10,997]=2,263.69$, $p<.001$).
- Fourth-grade regression analyses also revealed accuracy, number of objectives completed, and prior achievement as major predictors ($\beta=.27$, $p<.001$; $\beta=.06$, $p<.001$; and $\beta=.58$, $p<.001$; respectively). When all variables were accounted for, there were no statistically significant differences in STAAR scores between male and female students, among ethnic groups, or between economically and non-economically disadvantaged students. The eight predictors explained about 66 percent of the variance of the STAAR scores ($R^2=.664$, $F[8, 4,224]=1,041.36$, $p<.001$).
- Like the other grade levels, fifth-grade regression analyses resulted in accuracy, number of objectives completed, and prior achievement as major predictors ($\beta=.25$, $p<.001$; $\beta=.07$, $p<.001$; and $\beta=.61$, $p<.001$; respectively). When all variables were accounted for, economically disadvantaged status and ethnicity were statistically significant predictors.³² There were no statistically significant differences in STAAR scores between male and female students. The eight predictors explained about 74 percent of the variance of the STAAR scores ($R^2=.741$, $F[8, 714]=254.94$, $p<.001$).

³⁰Students who were *not* economically disadvantaged tended to have higher *TerraNova* scores than economically disadvantaged students, males typically had higher scores than females, and White students tended to have higher *TerraNova* scores than African American or Hispanic students. There were no statistically significant differences in *TerraNova* scores between White and other ethnic group students.

³¹ Students who were *not* economically disadvantaged tended to have higher STAAR scores than economically disadvantaged students, males typically had higher scores than females, and White students tended to have higher STAAR scores than African American students. There were no statistically significant differences in STAAR scores between White and Hispanic students or between White and other ethnic group students.

³² Students who were *not* economically disadvantaged tended to have higher STAAR scores than economically disadvantaged students. White students tended to have lower scores than other ethnic group students. There were no statistically significant differences in STAAR scores between White and African American students or between White and Hispanic students.

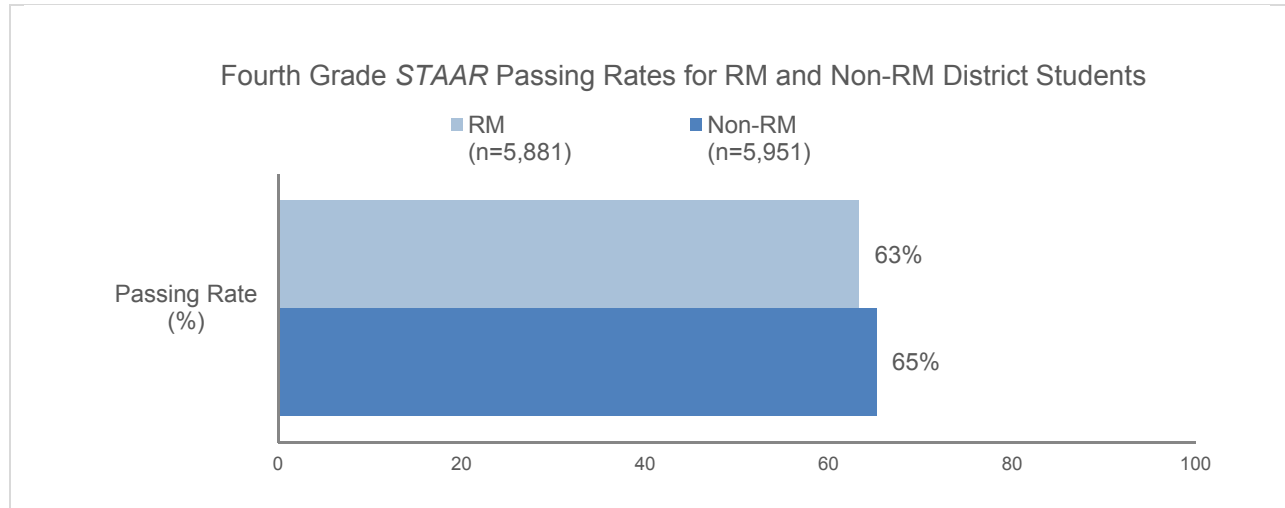
Table 4: Multiple Regression Major RM Predictors of Spring 2016 Mathematics Scores

Grade	Major Predictors	β	p	Variance Explained
2 ($n=11,238$)	Accuracy	.47	<.001	63%
	Prior Achievement	.31	<.001	
	Objectives Completed	.17	<.001	
3 ($n=11,006$)	Accuracy	.40	<.001	62%
	Prior Achievement	.41	<.001	
	Objectives Completed	.12	<.001	
4 ($n=4,233$)	Accuracy	.27	<.001	66%
	Prior Achievement	.58	<.001	
	Objectives Completed	.06	<.001	
5 ($n=723$)	Accuracy	.25	<.001	74%
	Prior Achievement	.61	<.001	
	Objectives Completed	.07	<.001	

Note. *TerraNova* (as of 6/9/16) NCE scores were used for second grade. *STAAR* (as of 7/11/16) scale scores were used for grades three to five.

RM and Non-RM Student Comparisons for Fourth-Grade Students. As shown in Figure 33, fourth-grade non-RM students had slightly higher mathematics *STAAR* passing rates than RM students (65% versus 63%). The average scale score was also higher for non-RM students than for RM students (1521.37 versus 1515.16). However, multiple regression results showed that when prior achievement³³ and economically disadvantaged status were accounted for, differences in *STAAR* scale scores between the two groups were *not* statistically significant (see Appendix P). Even so, the trend was opposite of what would be hoped.

Figure 33: Fourth-Grade Spring 2016 Mathematics STAAR Passing Rates for RM and Non-RM Students

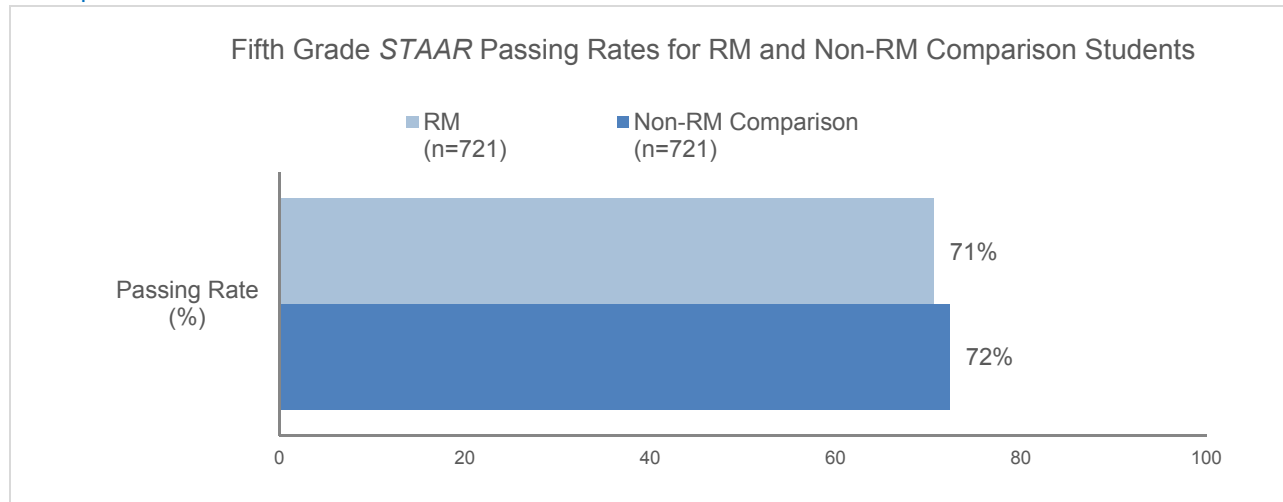


Note. % passing=Met the 2015-16 Level II Satisfactory Standard. Multiple regression results showed that when prior achievement and economically disadvantaged status were accounted for, differences in *STAAR* scale scores between the two groups were *not* statistically significant. *STAAR* data reported as of 7/11/16.

³³ Review of prior achievement for fourth-grade showed that non-RM students had higher *STAAR* 2015 mean mathematics scale scores than RM students (1411.49 versus 1402.48) and the district as a whole (1385.84).

RM and Non-RM Student Comparisons for Fifth-Grade Students. Like fourth grade, fifth-grade non-RM comparison students had slightly higher mathematics *STAAR* passing rates than RM students (72% versus 71% - see Figure 34). The average scale score was also slightly higher for non-RM students than for RM students (1579.34 versus 1576.48). However, multiple regression results showed that when prior achievement³⁴ and economically disadvantaged status were accounted for, differences in *STAAR* scale scores between the two groups were *not* statistically significant (see Appendix P). Even so, the trend is opposite of what would be hoped.

Figure 34: Fifth-Grade Spring 2016 Mathematics *STAAR* Passing Rates for RM and Non-RM Comparison Students



Note. % passing=Met the 2015-16 Level II Satisfactory Standard. Multiple regression results showed that when prior achievement and economically disadvantaged status were accounted for, differences in *STAAR* scale scores between the two groups were *not* statistically significant. *STAAR* data reported as of 7/11/16.

SUMMARY AND RECOMMENDATIONS

Summary

RM Context

A total of 32,889 students were enrolled in RM during 2015-16, which included 13,078 (97%) of the district's second graders, 12,848 (96%) of the district's third graders, 6,152 (49%) of the district's fourth graders, and 811 (7%) of the district's fifth graders. Second- and third-grade RM enrollment was similar to the last two years; however, the number of fourth graders decreased from 10,448 (130 schools) in 2013-14 to 9,218 (119 schools) in 2014-15 to 6,152 (81 schools) in 2015-16; fifth-grade participation increased from 411 students in 2014-15 to 811 students in 2015-16. Most 2015-16 RM students were economically disadvantaged (92%) and Hispanic (70%). Half were English language learners (ELLs).

³⁴ Per review of prior achievement for fifth-grade, RM students had higher *STAAR* 2015 mean mathematics scale scores than non-RM comparison students (1509.49 versus 1504.20) and the district as a whole (1477.15).

All district second- and third-grade teachers (except at Dealey, Mata, H. Stone) were required to use the RM curriculum in 2015-16, but RM was optional for fourth- and fifth-grade teachers. RM was supplemental to the district curriculum in grades two to four, which means teacher time was split between using district and RM curricula. The RM curriculum served as the full core curriculum for grade five.

The 2015-16 RM budget was \$1,925,777, which included \$1,777,370 for grades two to four (supplemental curriculum) and \$148,407 for grade five (core curriculum). The \$1,777,370 for supplemental RM included \$1,252,370 of Title I, Part A funds and \$525,000 of Title II, Part A funds. The \$148,407 fifth-grade budget included \$57,407 of DAP funds for student accounts, \$55,500 of DAP funds for professional development, and \$35,500 of general operating funds for professional development.

RM Implementation

Student Hours and Accuracy. Once again, Dallas ISD fell short of meeting implementation expectations. Most RM students (65% to 94%) did *not* meet the district's target for hours online, and a sizeable proportion (45% to 78%) logged less than 80 percent of expected hours. Whereas many third- (80%) and fourth-grade (60%) students met the district accuracy target, many second- (64%) and fifth-grade (58%) students did *not*.

Campus-level implementation continued to vary greatly within schools and within grade levels at the same schools. Most of the campuses with fourth (63%) and fifth (85%) grade were classified as low implementation schools. Schools were split mainly between the medium (56%) and low (40%) categories for second grade and divided between all three categories for third grade (44% low, 25% medium, 31% high).

Professional Development. Sixty-three percent of first-year teachers completed the QC course by the end of the first six weeks, which means 37 percent did not. Thus, many students could not begin using RM until later in the school year. Most untrained teachers were second-, third-, and fourth-grade RM teachers. About a fifth ($n=177$) of the almost 1,000 RM teachers opted to participate in additional RM professional development during the fall semester. Also, approximately 90 district staff members (teachers, campus administrators, central administrators) participated in RM's full-day Dallas GenieCon conference, which was held at Conrad High School in November 2015.

Classroom Observations. Results of second- and third-grade RM supplemental classroom walkthroughs showed teachers spent most of the time monitoring students (66%), conducting individual or small group interventions (60%), and reviewing the RM administrator screen (50%). About a third of the classrooms (32%) had one or more technology issues; these included non-working computers (14%), computer accessory issues (14%), and connectivity/internet issues (14%). In the majority of classes observed, all students used their RM notebooks as expected (66%) and all students were on task (80%).

During fifth-grade observations, teachers allocated most of the time to conducting individual or small group interventions (60%), while students mainly used RM (83%) and worked with the teacher individually or as part of a small group (60%). Technology-related issues were noted in 57 percent of observations with the main problems being non-working computers (40%), connectivity/internet issues

(13%), and computer accessory issues (5%). In most classes, all students were on task (74%) and all used their RM notebooks (66%).

Staff Perceptions of RM. Per interviews with RM and district staff, the RM project director and district mathematics director viewed the strong relationship between RM and the mathematics department as a success, especially when planning for GenieCon. RM ICs cited the change to a flexible support model as a success. Barriers to implementation included limited communication between RM and School Leadership staff, the roll out of fifth-grade technology, teacher turnover, teacher schedule changes that were not communicated to RM ICs, fewer teachers participating in professional development than in the past, the lack of alignment between fifth-grade curriculum and *ACPs*, and technology problems.

As in previous years, teachers were more positive than campus administrators on the overall survey items. Teachers and administrators were most positive about RM's benefit on students. Respondents continued to view training and resources as helpful, and administrators continued to report higher levels of communication than teachers. Most teachers (75% to 85%) believed students improved on key indicators (e.g., enjoyment of mathematics, confidence in mathematics ability, etc.). Several reported technology issues, especially with laptops/COW carts (35% to 39%) and wireless connectivity (26% to 30%). The main successes were increased student mathematics/problem solving skills and engagement. The most cited challenges were technology issues and meeting time requirements. Primary suggestions included increasing the number of computers and aligning RM and district curricula.

Mathematics Achievement of RM Students

Descriptive Statistics for RM Student Spring Mathematics Performance. Overall mean assessment scores for RM students were close to the district mean for grades two, three and five (mean differences ranged from 0.1 to 0.9). The mean difference in scale scores for fourth grade was 3.1 (RM students lower than the district). When reviewed by subgroup, mean scale scores for African American students were lower than for other groups, and White mean scores were higher.

Comparisons of Assessment Scores and Hour/Accuracy Target Categories. Like last year, RM students that met the accuracy target outperformed those who did not. Students that "met" the hour target tended to have slightly higher test scores than students in the "almost met" and "did not meet" categories; however, the differences were not as pronounced as those for accuracy.

Correlation and Multiple Regression Results. Correlation and multiple regression results were consistent with 2014-15 findings (Bush and Kim, August 2015). Students' mathematics scores were highly correlated with accuracy ($r=0.73, 0.69, 0.62$, and 0.74 for second-, third-, fourth-, and fifth-grade). Correlations between objectives completed and assessment scores were in the middle (0.29 to 0.48). The correlation coefficients between hours online and test scores were small (0.09 to 0.20). Multiple regression analyses showed that RM accuracy, prior achievement, and RM objectives completed were major predictors of second- through fifth-grade spring 2016 assessment scores.

Assessment Comparisons for Fourth- and Fifth-Grade RM and Non-RM Students. Non-RM comparison students in both fourth and fifth grades had slightly higher mathematics *STAAR* scores than

RM students (passing rates and scale scores). However, multiple regression results showed that when prior achievement and economically disadvantaged status were accounted for, differences in STAAR scale scores between the two groups were *not* statistically significant. Even so, the trend was opposite of what would be hoped.

Recommendations

Ensure higher levels of implementation for existing RM grade levels before expanding to additional grade levels. Across grade levels, there were more campuses in the “low” implementing category than in the “medium” and “high” implementing categories. This is especially concerning for fifth grade when RM is the full curriculum. With a 2015-16 RM budget of almost \$2 million, the district should ensure adequate return on its investment before further expansion.

Decide whether to continue using the fifth-grade RM curriculum when it serves as the full curriculum but does not align with the district curriculum and when 11 of 13 campuses met the evaluator criteria for “low” implementation. Per classroom observations and interviews, RM teachers had to veer away from the RM curriculum occasionally to ensure students covered all of the district student expectations. Implementation and outcome measures give further reason for concern as the majority of fifth-grade students (78%) “did not meet” hour expectations (logged less than 80% of expected hours) and because the non-RM comparison group slightly outperformed the RM group on Spring 2016 STAAR; the same was true for Spring 2015 STAAR results. Although Spring 2016 assessment differences between RM and non-RM students were not statistically significant, the trend was opposite of what would be hoped.

If RM continues to be a district priority, make sure teachers receive adequate guidance on how to meld two different curricula (district and RM). The district curriculum is fully aligned with local and state assessment measures, but RM is not. Because local and state assessment measures are part of the district Teacher Excellence Initiative, many campus staff members question why teachers should be pressured to spend so much time on RM when it does not align to district expectations. As recommended previously, make certain teachers have sufficient guidance on how to effectively blend the two different curricula.

Strategically plan for next year’s RM QC training to make sure more teachers complete the QC prior to or at the onset of the 2016-17 school year. A notable percentage of teachers (37%) did not complete QC training by the end of the first six weeks of Fall 2015, which was markedly worse than in the previous two school years. This meant many students could not use RM until after the first six weeks of the school year. As recommended in the past, the district needs to make sure more teachers complete the QC prior to or at the start of the school year.

Ensure RM teacher schedule changes are communicated to RM ICs in a timely manner. Per interviews with RM ICs, teacher schedule changes occurred often but were frequently not communicated to ICs. The result was limited support for some teachers and campuses. To ensure equitable campus support, it will be important that teacher schedule changes are communicated to RM ICs immediately.

Increase communication between RM and School Leadership, Teaching and Learning, and Information Technology staff members. Ongoing communication is needed to overcome barriers to implementation, strengthen campus support, and ensure the district is receiving a good return on its investment in RM (time and funds allocated).

Make certain all campuses have adequate working technology and are reporting issues to Information Technology as problems occur. Technology issues continued to be a challenge based on survey and classroom observation results. During interviews, RM IC coordinators noted that some teachers were not completing Information Technology tickets in a timely manner, which meant problems were not resolved quickly. It will be important to continue to add and upgrade campus technology while ensuring ample campus support and timely submission of tickets to Information Technology.

REFERENCES

- Bobko, P. (2001). *Correlation and regression: Applications for industrial organizational psychology and management* (2nd ed.). Thousand Oaks, CA: Sage.
- Bush, J. and Kim, M. (March 2016). Evaluation of Reasoning Mind: 2015-16 Interim Report. Dallas, TX: Dallas Independent School District.
- Bush, J. and Kim, M. (November 2015). School Leadership Fall 2015 Reasoning Mind Classroom Walkthrough Results. Dallas, TX: Dallas Independent School District.
- Bush, J. and Kim, M. (August 2015). Evaluation of Reasoning Mind: Final Report 2014-15. Dallas, TX: Dallas Independent School District.
- Bush, J. and Kim, M. (March 2015). Evaluation of Reasoning Mind: 2014-15 Interim Report. Dallas, TX: Dallas Independent School District.
- Bush, J. and Kim, M. (August 2014). Evaluation of Reasoning Mind: Final Report 2013-14. Dallas, TX: Dallas Independent School District.
- Bush, J. and Kim, M. (April 2014). Evaluation of Reasoning Mind: Fall 2013 Implementation and Outcome Findings. Dallas, TX: Dallas Independent School District.
- Bush, J. and Kim, M. (September 2013). Evaluation of the Reasoning Mind Mathematics Program: Final Report. Dallas, TX: Dallas Independent School District.
- Bush, J. and Kim, M. (March 2013). Preliminary evaluation findings for the 2012-13 third-grade Reasoning Mind Mathematics Program: First semester implementation and outcome data. Dallas, TX: Dallas Independent School District.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- McEnturff, A. (2014). Evaluation of the 2013-2014 Home Instruction for Parents of Preschool Youngsters (HIPPY) Program. Dallas, TX: Dallas Independent School District.
- Reasoning Mind websites. www.reasoningmind.org and www.community.rmcity.org/communities_home.
- Stuart, E. A. (2010). Matching methods for causal inference: A review and a look forward. *Statistical Science*, 25(1), 1-21.
- Thoemmes, F. J. (2012). Propensity score matching in SPSS. <http://arxiv.org/ftp/arxiv/papers/1201/1201.6385.pdf>. Accessed August 11, 2014.
- Waxman, H. C., & Houston, W. R. (2012). Evaluation of the 2010-2011 Reasoning Mind Program in Beaumont ISD. Reasoning Mind, Inc.

APPENDICES

Appendix A

Appendix A: Demographic Characteristics of 2015-16 RM Students by Feeder Pattern and Grade

Characteristic	Second Grade <i>n</i> (%)	Third Grade <i>n</i> (%)	Fourth Grade <i>n</i> (%)	Fifth Grade <i>n</i> (%)	All ^a <i>n</i> (%)
All*					
Gender					
Male	6,743 (52)	6,624 (52)	3,154 (51)	413 (51)	16,934 (51)
Female	6,335 (48)	6,224 (48)	2,998 (49)	398 (49)	15,955 (49)
Ethnicity					
African American	2,970 (23)	2,897 (22)	1,491 (24)	123 (15)	7,481 (23)
Hispanic	9,164 (70)	9,126 (71)	4,268 (70)	645 (80)	23,203 (70)
White	660 (5)	591 (5)	247 (4)	32 (4)	1,530 (5)
Other	284 (2)	234 (2)	146 (2)	11 (1)	675 (2)
Economically Disadvantaged	11,942 (91)	11,766 (92)	5,690 (93)	756 (93)	30,154 (92)
Gifted	1,732 (13)	1,802 (14)	991 (16)	153 (19)	4,678 (14)
Special Education	625 (5)	662 (5)	415 (7)	59 (7)	1,761 (5)
English Language Learner	6,432 (49)	6,424 (50)	3,158 (51)	452 (56)	16,466 (50)
<i>Total</i>	<i>13,078 (100)</i>	<i>12,848 (100)</i>	<i>6,152 (100)</i>	<i>811 (100)</i>	<i>32,889 (100)</i>
ACE					
Gender					
Male	184 (58)	170 (50)	142 (55)	*	496 (54)
Female	134 (42)	173 (50)	117 (45)	*	424 (46)
Ethnicity					
African American	179 (56)	180 (52)	110 (42)	*	469 (51)
Hispanic	136 (43)	157 (46)	145 (56)	*	438 (47)
White	1 (0)	3 (1)	2 (1)	*	6 (1)
Other	2 (1)	3 (1)	2 (1)	*	7 (1)
Economically Disadvantaged	290 (91)	322 (94)	235 (91)	*	847 (92)
Gifted	24 (8)	34 (10)	28 (11)	*	86 (9)
Special Education	18 (6)	15 (4)	17 (7)	*	50 (5)
English Language Learner	101 (32)	125 (36)	116 (45)	*	342 (37)
<i>Total</i>	<i>318 (100)</i>	<i>343 (100)</i>	<i>259 (100)</i>	<i>*</i>	<i>920 (100)</i>
Adams					
Gender					
Male	451 (51)	469 (52)	165 (49)	52 (46)	1,137 (51)
Female	431 (49)	440 (48)	171 (51)	60 (54)	1,102 (49)
Ethnicity					
African American	140 (16)	126 (14)	63 (19)	9 (8)	338 (15)
Hispanic	632 (72)	696 (77)	227 (67)	96 (86)	1,651 (74)
White	86 (10)	68 (7)	36 (11)	4 (3)	194 (9)
Other	24 (2)	19 (2)	10 (3)	3 (3)	56 (2)
Economically Disadvantaged	769 (87)	808 (89)	292 (87)	103 (92)	1,972 (88)
Gifted	108 (12)	137 (15)	53 (16)	20 (18)	318 (14)
Special Education	56 (6)	50 (6)	30 (9)	10 (9)	146 (7)
English Language Learner	416 (47)	457 (50)	168 (50)	60 (54)	1,101 (49)
<i>Total</i>	<i>882 (100)</i>	<i>909 (100)</i>	<i>336 (100)</i>	<i>112 (100)</i>	<i>2,239 (100)</i>
Adamson					
Gender					
Male	158 (50)	145 (48)	131 (54)	*	434 (50)
Female	158 (50)	156 (52)	112 (46)	*	426 (50)
Ethnicity					
African American	9 (3)	6 (2)	7 (3)	*	22 (3)
Hispanic	305 (97)	292 (97)	234 (96)	*	831 (96)
White	1 (0)	3 (1)	2 (1)	*	6 (1)
Other	1 (0)	0 (0)	0 (0)	*	1 (0)
Economically Disadvantaged	307 (97)	295 (98)	237 (98)	*	839 (98)
Gifted	41 (13)	46 (15)	39 (16)	*	126 (15)
Special Education	20 (6)	13 (4)	14 (6)	*	47 (6)
English Language Learner	210 (67)	211 (70)	169 (70)	*	590 (69)
<i>Total</i>	<i>316 (100)</i>	<i>301 (100)</i>	<i>243 (100)</i>	<i>*</i>	<i>860 (100)</i>

table continues

Table (continued)

Characteristic	Second Grade <i>n</i> (%)	Third Grade <i>n</i> (%)	Fourth Grade <i>n</i> (%)	Fifth Grade <i>n</i> (%)	All ^a <i>n</i> (%)
Carter					
Gender					
Male	237 (56)	200 (54)	172 (58)	*	609 (56)
Female	186 (44)	170 (46)	126 (42)	*	482 (44)
Ethnicity					
African American	271 (64)	262 (71)	207 (69)	*	740 (68)
Hispanic	143 (34)	102 (27)	87 (29)	*	332 (30)
White	6 (1)	3 (1)	2 (1)	*	11 (1)
Other	3 (1)	3 (1)	2 (1)	*	8 (1)
Economically Disadvantaged	382 (90)	332 (90)	267 (90)	*	981 (90)
Gifted	48 (11)	44 (12)	30 (10)	*	122 (11)
Special Education	17 (4)	27 (7)	22 (7)	*	66 (6)
English Language Learner	92 (22)	62 (17)	62 (21)	*	216 (20)
<i>Total</i>	<i>423 (100)</i>	<i>370 (100)</i>	<i>298 (100)</i>	<i>*</i>	<i>1,091 (100)</i>
Conrad					
Gender					
Male	281 (49)	234 (51)	170 (48)	*	685 (50)
Female	289 (51)	225 (49)	183 (52)	*	697 (50)
Ethnicity					
African American	83 (15)	82 (18)	48 (14)	*	213 (16)
Hispanic	388 (68)	304 (66)	234 (66)	*	926 (67)
White	19 (3)	16 (4)	11 (3)	*	46 (3)
Other	80 (14)	57 (12)	60 (17)	*	197 (14)
Economically Disadvantaged	563 (99)	446 (97)	343 (97)	*	1,352 (98)
Gifted	68 (12)	69 (15)	35 (10)	*	172 (12)
Special Education	24 (4)	23 (5)	15 (4)	*	62 (5)
English Language Learner	418 (73)	325 (71)	271 (77)	*	1,014 (73)
<i>Total</i>	<i>570 (100)</i>	<i>459 (100)</i>	<i>353 (100)</i>	<i>*</i>	<i>1,382 (100)</i>
Hillcrest					
Gender					
Male	232 (48)	234 (51)	47 (62)	27 (51)	540 (50)
Female	255 (52)	228 (49)	29 (38)	26 (49)	538 (50)
Ethnicity					
African American	86 (18)	61 (13)	4 (5)	5 (9)	156 (14)
Hispanic	340 (70)	351 (76)	66 (87)	36 (68)	793 (74)
White	41 (8)	37 (8)	5 (7)	10 (19)	93 (9)
Other	20 (4)	13 (3)	1 (1)	2 (4)	36 (3)
Economically Disadvantaged	409 (84)	409 (89)	67 (88)	48 (91)	933 (87)
Gifted	97 (20)	74 (16)	17 (22)	20 (38)	208 (19)
Special Education	27 (6)	33 (7)	1 (1)	2 (4)	63 (6)
English Language Learner	278 (57)	280 (61)	55 (72)	32 (60)	645 (60)
<i>Total</i>	<i>487 (100)</i>	<i>462 (100)</i>	<i>76 (100)</i>	<i>53 (100)</i>	<i>1,078 (100)</i>
Jefferson					
Gender					
Male	438 (55)	421 (52)	129 (54)	17 (59)	1,005 (54)
Female	352 (45)	396 (48)	110 (46)	12 (41)	870 (46)
Ethnicity					
African American	43 (5)	43 (5)	10 (4)	1 (3)	97 (5)
Hispanic	733 (93)	756 (92)	223 (93)	28 (97)	1,740 (93)
White	8 (1)	12 (2)	4 (2)	0 (0)	24 (1)
Other	6 (1)	6 (1)	2 (1)	0 (0)	14 (1)
Economically Disadvantaged	759 (96)	781 (96)	226 (95)	28 (97)	1,794 (96)
Gifted	102 (13)	111 (14)	40 (17)	6 (21)	259 (14)
Special Education	42 (5)	40 (5)	18 (8)	7 (24)	107 (6)
English Language Learner	586 (74)	621 (76)	190 (80)	23 (79)	1,420 (76)
<i>Total</i>	<i>790 (100)</i>	<i>817 (100)</i>	<i>239 (100)</i>	<i>29 (100)</i>	<i>1,875 (100)</i>
Kimball					
Gender					
Male	391 (53)	379 (51)	152 (46)	56 (46)	978 (51)
Female	342 (47)	362 (49)	177 (54)	65 (54)	946 (49)

table continues

Table (continued)

Characteristic	Second Grade <i>n</i> (%)	Third Grade <i>n</i> (%)	Fourth Grade <i>n</i> (%)	Fifth Grade <i>n</i> (%)	All ^a <i>n</i> (%)
Lincoln					
Ethnicity					
African American	132 (18)	128 (17)	13 (4)	2 (2)	275 (14)
Hispanic	589 (80)	604 (81)	309 (94)	117 (96)	1,619 (84)
White	8 (1)	5 (1)	3 (1)	2 (2)	18 (1)
Other	4 (1)	4 (1)	4 (1)	0 (0)	12 (1)
Economically Disadvantaged	659 (90)	664 (90)	310 (94)	114 (94)	1,747 (91)
Gifted	82 (11)	103 (14)	50 (15)	17 (14)	252 (13)
Special Education	18 (3)	25 (3)	11 (3)	7 (6)	61 (3)
English Language Learner	372 (51)	386 (52)	209 (64)	77 (64)	1,044 (54)
<i>Total</i>	<i>733 (100)</i>	<i>741 (100)</i>	<i>329 (100)</i>	<i>121 (100)</i>	<i>1,924 (100)</i>
Madison					
Gender					
Male	110 (58)	85 (51)	32 (53)	*	227 (55)
Female	81 (42)	80 (49)	28 (47)	*	189 (45)
Ethnicity					
African American	134 (70)	112 (68)	51 (85)	*	297 (71)
Hispanic	54 (28)	50 (30)	9 (15)	*	113 (27)
White	3 (2)	0 (0)	0 (0)	*	3 (1)
Other	0 (0)	3 (2)	0 (0)	*	3 (1)
Economically Disadvantaged	188 (98)	162 (98)	58 (97)	*	408 (98)
Gifted	31 (16)	21 (13)	7 (12)	*	59 (14)
Special Education	3 (2)	6 (4)	4 (7)	*	13 (3)
English Language Learner	36 (19)	42 (26)	7 (12)	*	85 (20)
<i>Total</i>	<i>191 (100)</i>	<i>165 (100)</i>	<i>60 (100)</i>	*	<i>416 (100)</i>
Molina					
Gender					
Male	148 (51)	132 (51)	120 (49)	*	400 (51)
Female	141 (49)	127 (49)	124 (51)	*	392 (49)
Ethnicity					
African American	154 (53)	137 (53)	125 (51)	*	416 (53)
Hispanic	126 (44)	118 (46)	116 (48)	*	360 (45)
White	3 (1)	1 (0)	2 (1)	*	6 (1)
Other	6 (2)	3 (1)	1 (0)	*	10 (1)
Economically Disadvantaged	283 (98)	255 (99)	237 (97)	*	775 (98)
Gifted	28 (10)	22 (9)	44 (18)	*	94 (12)
Special Education	9 (3)	11 (4)	15 (6)	*	35 (4)
English Language Learner	83 (29)	76 (29)	81 (33)	*	240 (30)
<i>Total</i>	<i>289 (100)</i>	<i>259 (100)</i>	<i>244 (100)</i>	*	<i>792 (100)</i>
North Dallas					
Gender					
Male	256 (52)	278 (55)	62 (56)	*	596 (54)
Female	239 (48)	224 (45)	48 (44)	*	511 (46)
Ethnicity					
African American	32 (6)	31 (6)	3 (3)	*	66 (6)
Hispanic	454 (92)	464 (92)	107 (97)	*	1,025 (92)
White	4 (1)	3 (1)	0 (0)	*	7 (1)
Other	5 (1)	4 (1)	0 (0)	*	9 (1)
Economically Disadvantaged	471 (95)	480 (96)	99 (90)	*	1,050 (95)
Gifted	40 (8)	52 (10)	10 (9)	*	102 (9)
Special Education	23 (5)	28 (6)	11 (10)	*	62 (6)
English Language Learner	280 (57)	283 (56)	71 (65)	*	634 (57)
<i>Total</i>	<i>495 (100)</i>	<i>502 (100)</i>	<i>110 (100)</i>	*	<i>1,107 (100)</i>

table continues

Table (continued)

Characteristic	Second Grade <i>n</i> (%)	Third Grade <i>n</i> (%)	Fourth Grade <i>n</i> (%)	Fifth Grade <i>n</i> (%)	All ^a <i>n</i> (%)
Economically Disadvantaged	505 (95)	512 (94)	265 (94)	*	1,282 (94)
Gifted	75 (14)	88 (16)	44 (16)	*	207 (15)
Special Education	41 (8)	36 (7)	20 (7)	*	97 (7)
English Language Learner	283 (53)	282 (52)	154 (54)	*	719 (53)
<i>Total</i>	530 (100)	546 (100)	283 (100)	*	1,359 (100)
Pinkston					
Gender					
Male	304 (49)	293 (47)	301 (49)	159 (54)	1,057 (49)
Female	323 (51)	325 (53)	320 (51)	137 (46)	1,105 (51)
Ethnicity					
African American	117 (18)	111 (18)	120 (19)	82 (28)	430 (20)
Hispanic	502 (80)	496 (80)	487 (79)	211 (71)	1,696 (78)
White	3 (1)	6 (1)	8 (1)	2 (1)	19 (1)
Other	5 (1)	5 (1)	6 (1)	1 (0)	17 (1)
Economically Disadvantaged	608 (97)	599 (97)	596 (96)	282 (95)	2,085 (96)
Gifted	90 (14)	89 (14)	133 (21)	42 (14)	354 (16)
Special Education	32 (5)	35 (6)	29 (5)	24 (8)	120 (6)
English Language Learner	286 (46)	297 (48)	282 (45)	131 (44)	996 (46)
<i>Total</i>	627 (100)	618 (100)	621 (100)	296 (100)	2,162 (100)
Roosevelt					
Gender					
Male	178 (53)	168 (50)	150 (57)	22 (55)	518 (53)
Female	155 (47)	167 (50)	112 (43)	18 (45)	452 (47)
Ethnicity					
African American	177 (53)	182 (54)	141 (54)	14 (35)	514 (53)
Hispanic	146 (44)	149 (45)	116 (44)	21 (53)	432 (45)
White	8 (2)	3 (1)	1 (0)	2 (5)	14 (1)
Other	2 (1)	1 (0)	4 (2)	3 (7)	10 (1)
Economically Disadvantaged	314 (94)	313 (93)	253 (97)	37 (93)	917 (95)
Gifted	42 (13)	37 (11)	54 (21)	22 (55)	155 (16)
Special Education	11 (3)	15 (5)	17 (7)	1 (3)	44 (5)
English Language Learner	103 (31)	108 (32)	88 (34)	16 (40)	315 (33)
<i>Total</i>	333 (100)	335 (100)	262 (100)	40 (100)	970 (100)
Samuell					
Gender					
Male	391 (51)	382 (52)	165 (53)	*	938 (52)
Female	381 (49)	348 (48)	147 (47)	*	876 (48)
Ethnicity					
African American	157 (20)	145 (20)	38 (12)	*	340 (19)
Hispanic	585 (76)	567 (77)	263 (84)	*	1,415 (78)
White	19 (3)	12 (2)	6 (2)	*	37 (2)
Other	11 (1)	6 (1)	5 (2)	*	22 (1)
Economically Disadvantaged	723 (94)	693 (95)	301 (97)	*	1,717 (95)
Gifted	100 (13)	100 (14)	60 (19)	*	260 (14)
Special Education	30 (4)	33 (5)	15 (5)	*	78 (4)
English Language Learner	440 (57)	425 (58)	187 (60)	*	1,052 (58)
<i>Total</i>	772 (100)	730 (100)	312 (100)	*	1,814 (100)
Seagoville					
Gender					
Male	267 (53)	255 (53)	149 (51)	80 (50)	751 (52)
Female	237 (47)	230 (47)	144 (49)	80 (50)	691 (48)
Ethnicity					
African American	69 (14)	69 (14)	41 (14)	10 (6)	189 (13)
Hispanic	352 (70)	332 (68)	209 (71)	136 (85)	1,029 (71)
White	78 (15)	76 (16)	33 (11)	12 (8)	199 (14)
Other	5 (1)	8 (2)	10 (4)	2 (1)	25 (2)

table continues

Table (continued)

Characteristic	Second Grade <i>n</i> (%)	Third Grade <i>n</i> (%)	Fourth Grade <i>n</i> (%)	Fifth Grade <i>n</i> (%)	All ^a <i>n</i> (%)
Economically Disadvantaged	463 (92)	443 (91)	266 (91)	144 (90)	1,316 (91)
Gifted	88 (18)	84 (17)	58 (20)	26 (16)	256 (18)
Special Education	31 (6)	30 (6)	29 (10)	8 (5)	98 (7)
English Language Learner	247 (49)	232 (48)	151 (52)	113 (71)	743 (52)
<i>Total</i>	<i>504 (100)</i>	<i>485 (100)</i>	<i>293 (100)</i>	<i>160 (100)</i>	<i>1,442 (100)</i>
Skyline					
Gender					
Male	474 (53)	509 (53)	196 (48)	*	1,179 (52)
Female	420 (47)	448 (47)	217 (52)	*	1,085 (48)
Ethnicity					
African American	251 (28)	261 (27)	125 (30)	*	637 (28)
Hispanic	617 (69)	677 (71)	280 (68)	*	1,574 (70)
White	14 (2)	8 (1)	3 (1)	*	25 (1)
Other	12 (1)	11 (1)	5 (1)	*	28 (1)
Economically Disadvantaged	853 (95)	928 (97)	394 (95)	*	2,175 (96)
Gifted	91 (10)	106 (11)	60 (15)	*	257 (11)
Special Education	39 (4)	45 (5)	32 (8)	*	116 (5)
English Language Learner	450 (50)	481 (50)	207 (50)	*	1,138 (50)
<i>Total</i>	<i>894 (100)</i>	<i>957 (100)</i>	<i>413 (100)</i>	*	<i>2,264 (100)</i>
South Oak Cliff					
Gender					
Male	364 (54)	324 (51)	198 (51)	*	886 (52)
Female	315 (46)	315 (49)	194 (49)	*	824 (48)
Ethnicity					
African American	342 (50)	352 (55)	209 (53)	*	903 (52)
Hispanic	328 (48)	280 (44)	175 (45)	*	783 (46)
White	4 (1)	5 (1)	5 (1)	*	14 (1)
Other	5 (1)	2 (0)	3 (1)	*	10 (1)
Economically Disadvantaged	639 (94)	596 (93)	375 (96)	*	1,610 (94)
Gifted	88 (13)	98 (15)	50 (13)	*	236 (14)
Special Education	23 (3)	23 (4)	33 (8)	*	79 (5)
English Language Learner	248 (37)	217 (34)	143 (37)	*	608 (36)
<i>Total</i>	<i>679 (100)</i>	<i>639 (100)</i>	<i>392 (100)</i>	*	<i>1,710 (100)</i>
Spruce					
Gender					
Male	498 (50)	535 (53)	162 (52)	*	1,195 (52)
Female	501 (50)	477 (47)	148 (48)	*	1,126 (48)
Ethnicity					
African American	225 (22)	233 (23)	72 (23)	*	530 (23)
Hispanic	747 (75)	752 (74)	233 (75)	*	1,732 (74)
White	17 (2)	17 (2)	4 (2)	*	38 (2)
Other	10 (1)	10 (1)	1 (0)	*	21 (1)
Economically Disadvantaged	965 (97)	967 (96)	297 (96)	*	2,229 (96)
Gifted	146 (15)	163 (16)	50 (16)	*	359 (16)
Special Education	41 (4)	41 (4)	25 (8)	*	107 (5)
English Language Learner	541 (54)	543 (54)	166 (54)	*	1,250 (54)
<i>Total</i>	<i>999 (100)</i>	<i>1,012 (100)</i>	<i>310 (100)</i>	*	<i>2,321 (100)</i>
Sunset					
Gender					
Male	330 (49)	361 (54)	28 (36)	*	719 (51)
Female	347 (51)	310 (46)	49 (64)	*	706 (49)
Ethnicity					
African American	11 (2)	13 (2)	1 (1)	*	25 (2)
Hispanic	643 (95)	625 (93)	72 (94)	*	1,340 (94)
White	20 (3)	29 (4)	3 (4)	*	52 (3)
Other	3 (0)	4 (1)	1 (1)	*	8 (1)
Economically Disadvantaged	619 (91)	611 (91)	73 (95)	*	1,303 (91)
Gifted	96 (14)	89 (13)	12 (16)	*	197 (14)
Special Education	33 (5)	40 (6)	4 (5)	*	77 (5)
English Language Learner	342 (51)	337 (50)	40 (52)	*	719 (51)
<i>Total</i>	<i>677 (100)</i>	<i>671 (100)</i>	<i>77 (100)</i>	*	<i>1,425 (100)</i>

table continues

Table (continued)

Characteristic	Second Grade <i>n</i> (%)	Third Grade <i>n</i> (%)	Fourth Grade <i>n</i> (%)	Fifth Grade <i>n</i> (%)	All ^a <i>n</i> (%)
White					
Gender					
Male	389 (49)	417 (53)	274 (52)	*	1,080 (51)
Female	409 (51)	362 (47)	253 (48)	*	1,024 (49)
Ethnicity					
African American	82 (10)	76 (10)	30 (6)	*	188 (9)
Hispanic	611 (77)	605 (78)	430 (82)	*	1,646 (78)
White	76 (9)	66 (8)	50 (9)	*	192 (9)
Other	29 (4)	32 (4)	17 (3)	*	78 (4)
Economically Disadvantaged	671 (84)	665 (85)	458 (87)	*	1,794 (85)
Gifted	136 (17)	116 (15)	86 (16)	*	338 (16)
Special Education	40 (5)	46 (6)	44 (8)	*	130 (6)
English Language Learner	434 (54)	439 (56)	316 (60)	*	1,189 (57)
Total	798 (100)	779 (100)	527 (100)	*	2,104 (100)
Wilmer-Hutchins					
Gender					
Male	136 (51)	98 (41)	0 (0)	*	234 (46)
Female	132 (49)	139 (59)	0 (0)	*	271 (54)
Ethnicity					
African American	124 (46)	128 (54)	0 (0)	*	252 (50)
Hispanic	129 (48)	102 (43)	0 (0)	*	231 (45)
White	7 (3)	6 (3)	0 (0)	*	13 (3)
Other	8 (3)	1 (0)	0 (0)	*	9 (2)
Economically Disadvantaged	250 (93)	221 (93)	0 (0)	*	471 (93)
Gifted	34 (13)	23 (10)	0 (0)	*	57 (11)
Special Education	11 (4)	9 (4)	0 (0)	*	20 (4)
English Language Learner	80 (30)	67 (28)	0 (0)	*	147 (29)
Total	268 (100)	237 (100)	0 (0)	*	505 (100)
Wilson					
Gender					
Male	252 (50)	253 (50)	50 (44)	*	555 (49)
Female	250 (50)	257 (50)	64 (56)	*	571 (51)
Ethnicity					
African American	38 (8)	29 (6)	7 (6)	*	74 (7)
Hispanic	219 (43)	263 (51)	36 (32)	*	518 (46)
White	222 (44)	199 (39)	63 (55)	*	484 (43)
Other	23 (5)	19 (4)	8 (7)	*	50 (4)
Economically Disadvantaged	251 (50)	263 (52)	40 (35)	*	554 (49)
Gifted	77 (15)	96 (19)	31 (27)	*	204 (18)
Special Education	35 (7)	37 (7)	8 (7)	*	80 (7)
English Language Learner	105 (21)	128 (25)	25 (22)	*	258 (23)
Total	502 (100)	510 (100)	114 (100)	*	1,126 (100)

Source. PEIMS district database (10/30/2015) for all students in the RM database.

Note. Analysis was limited to students in the RM database that were in Dallas ISD as of PEIMS snapshot date (10/30/2015) and with RM hours equal to or greater than 0.1. Students in schools that did not implement RM or stopped using RM early in the fall (Dealey, Mata, and H. Stone elementary schools for grades 2 to 4 and J. Stone elementary school for grade 5) were excluded from the analyses. Cells marked with an asterisk (*) indicate no students were in the RM system. "Other" ethnicity included Asian, American Indian, Native Hawaiian or Other Pacific Islander, two or more races, and not available. ^aAll included Hospital/Homebound students (*n*=1 for each grade from grades 2 to 4).

Appendix B

Appendix B: 2015-16 RM Hour¹ and Accuracy² Statistics by Feeder Pattern, Campus, and Grade

High School Feeder	Campus	Grade	n	RM Hours for 2015-16		Accuracy Rates for 2015-16	
				Mean	% Met Target	Mean	% Met Target
ACE	Blanton	2	77	49.31	25	69.49	31
ACE	Blanton	3	85	68.97	73	81.46	72
ACE	Blanton	4	91	16.88	0	75.54	63
ACE	Lee, U	2	93	31.13	1	64.59	27
ACE	Lee, U	3	94	49.13	26	79.72	71
ACE	Lee, U	4	88	22.81	0	66.59	36
ACE	Mills	2	55	70.89	67	68.32	36
ACE	Mills	3	66	52.61	24	78.39	67
ACE	Mills	4	65	20.11	3	69.75	51
ACE	Pease	2	93	47.35	24	56.98	8
ACE	Pease	3	98	40.47	7	76.99	67
ACE	Pease	4	15	5.66	0	69.20	33
Adams, B	Bayles	2	85	51.71	34	66.49	21
Adams, B	Bayles	3	97	50.64	29	77.80	68
Adams, B	Bayles	4	89	36.12	1	74.43	55
Adams, B	Casa View	2	113	22.61	0	73.85	55
Adams, B	Casa View	3	113	26.88	0	83.59	85
Adams, B	Casa View	4	28	0.66	0	88.65	83
Adams, B	Gill	2	121	51.80	16	69.64	31
Adams, B	Gill	3	112	48.34	7	83.89	86
Adams, B	Hexter	2	93	59.35	43	78.72	69
Adams, B	Hexter	3	80	48.16	4	88.78	95
Adams, B	Hexter	4	76	5.12	0	82.72	80
Adams, B	Kiest	2	108	55.59	29	69.21	33
Adams, B	Kiest	3	113	56.60	48	82.09	80
Adams, B	Kiest	4	46	0.49	0	79.40	75
Adams, B	Reilly	2	75	46.29	17	75.02	55
Adams, B	Reilly	3	97	34.00	0	85.06	86
Adams, B	Reinhardt	2	95	68.53	76	70.81	42
Adams, B	Reinhardt	3	88	52.30	14	85.14	89
Adams, B	Sanger	2	80	56.03	39	68.99	31
Adams, B	Sanger	3	74	50.94	28	84.05	91
Adams, B	Smith, L	2	112	43.76	6	71.14	44
Adams, B	Smith, L	3	135	54.53	29	83.50	85
Adams, B	Smith, L	4	91	61.44	55	80.69	76
Adams, B	Smith, L	5	112	191.87	33	74.54	54
Adamson	Botello	2	83	22.86	0	62.30	14
Adamson	Botello	3	89	46.56	0	81.33	75
Adamson	Botello	4	79	13.33	0	78.37	72
Adamson	Bowie	2	74	35.23	0	73.86	55
Adamson	Bowie	3	68	43.77	6	81.69	78
Adamson	Bowie	4	62	50.44	19	76.17	60
Adamson	Hogg	2	30	50.08	10	65.03	20
Adamson	Hogg	3	36	47.98	8	77.43	61
Adamson	Hogg	4	37	41.50	0	77.93	73
Adamson	Peeler	2	67	46.80	15	61.58	16
Adamson	Peeler	3	48	41.34	4	82.58	81
Adamson	Reagan	2	62	59.44	61	67.65	31
Adamson	Reagan	3	60	30.44	3	84.62	87
Adamson	Reagan	4	62	31.37	0	71.69	44
Carter	Alexander	2	61	40.09	3	60.34	13
Carter	Alexander	3	59	28.42	0	80.19	75
Carter	Alexander	4	53	9.53	0	66.25	47
Carter	McNair	2	118	38.24	4	63.29	27
Carter	McNair	3	118	44.86	7	81.06	75
Carter	McNair	4	103	8.94	0	71.52	51
Carter	Terry	2	59	34.68	24	72.15	52
Carter	Terry	3	32	11.16	0	88.83	94
Carter	Terry	4	57	70.64	91	76.61	63
Carter	Turner	2	56	30.82	0	66.10	34
Carter	Turner	3	52	24.47	0	81.37	71
Carter	Twain	2	55	39.14	0	62.19	24
Carter	Twain	3	39	30.37	0	74.79	62
Carter	Twain	4	75	29.70	0	67.13	32
Carter	Weiss	2	74	52.28	23	65.18	18
Carter	Weiss	3	70	72.58	80	83.37	89
Conrad	Highland Meadows	2	141	29.42	0	72.84	47

table continues

Table (continued)

High School Feeder	Campus	Grade	n	RM Hours for 2015-16		Accuracy Rates for 2015-16	
				Mean	% Met Target	Mean	% Met Target
Conrad	Highland Meadows	3	105	18.67	0	81.63	77
Conrad	Highland Meadows	4	126	22.26	0	72.12	48
Conrad	Hotchkiss	2	149	80.22	85	66.36	29
Conrad	Hotchkiss	3	123	23.66	1	78.29	70
Conrad	Lowe	2	92	58.69	54	65.02	27
Conrad	Lowe	3	94	59.57	46	79.60	77
Conrad	Lowe	4	91	27.95	10	69.68	44
Conrad	McShan	2	119	16.94	0	66.79	29
Conrad	McShan	3	87	25.12	0	78.40	71
Conrad	McShan	4	86	46.33	26	72.91	47
Conrad	Stone, J	2	69	39.08	4	70.30	32
Conrad	Stone, J	3	50	45.35	12	81.65	78
Conrad	Stone, J	4	48	56.54	44	70.17	52
Hillcrest	Frank	2	178	60.09	41	73.92	48
Hillcrest	Frank	3	175	45.29	6	83.11	87
Hillcrest	Kramer	2	81	60.98	56	69.24	35
Hillcrest	Kramer	3	62	48.76	18	79.14	71
Hillcrest	Pershing	2	81	64.74	84	70.75	35
Hillcrest	Pershing	3	86	56.47	27	82.67	79
Hillcrest	Preston Hollow	2	70	72.12	86	73.22	53
Hillcrest	Preston Hollow	3	67	64.22	73	84.13	88
Hillcrest	Preston Hollow	4	69	59.38	59	78.04	67
Hillcrest	Preston Hollow	5	53	157.30	0	75.34	57
Hillcrest	Rogers	2	77	72.14	83	72.12	42
Hillcrest	Rogers	3	71	76.22	86	83.87	87
Jefferson	Burnet	2	146	77.10	96	64.82	27
Jefferson	Burnet	3	144	63.19	61	82.09	75
Jefferson	Burnet	4	137	11.12	0	82.29	74
Jefferson	Cigarroa	2	110	43.55	18	65.08	22
Jefferson	Cigarroa	3	92	55.68	38	83.48	90
Jefferson	Field	2	67	43.43	3	68.38	31
Jefferson	Field	3	82	49.69	6	82.54	80
Jefferson	Foster	2	122	43.35	16	67.31	23
Jefferson	Foster	3	136	41.49	6	81.10	75
Jefferson	Knight	2	83	70.76	77	71.11	39
Jefferson	Knight	3	73	68.17	67	83.93	86
Jefferson	Polk	2	56	48.01	4	71.24	45
Jefferson	Polk	3	59	50.85	39	82.68	80
Jefferson	Saldivar	2	121	52.91	18	67.11	35
Jefferson	Saldivar	3	134	57.30	51	83.72	85
Jefferson	Walnut Hill	2	46	69.89	93	71.26	35
Jefferson	Walnut Hill	3	55	75.62	100	85.90	89
Jefferson	Walnut Hill	4	45	49.08	0	83.10	89
Jefferson	Williams	2	39	71.03	69	69.40	31
Jefferson	Williams	3	42	51.39	52	85.99	95
Jefferson	Williams	4	45	30.76	0	75.31	60
Jefferson	Williams	5	29	136.37	0	63.45	17
Kimball	Brashear	2	95	38.07	0	74.88	49
Kimball	Brashear	3	108	24.64	0	89.40	96
Kimball	Carpenter	2	57	50.56	9	62.38	9
Kimball	Carpenter	3	51	38.06	2	81.54	84
Kimball	Donald	2	63	32.09	0	68.12	24
Kimball	Donald	3	56	61.56	55	79.08	73
Kimball	Donald	4	55	28.77	0	74.04	55
Kimball	Donald	5	56	89.68	0	65.62	20
Kimball	Hall	2	81	23.46	0	75.05	60
Kimball	Hall	3	88	22.29	0	84.45	89
Kimball	Hall	4	63	20.54	0	73.99	59
Kimball	Henderson	2	73	71.31	82	72.38	42
Kimball	Henderson	3	74	71.63	81	84.72	86
Kimball	Henderson	4	76	56.97	34	79.49	75
Kimball	Henderson	5	65	101.55	0	77.10	61
Kimball	Moreno	2	59	62.76	73	71.31	37
Kimball	Moreno	3	65	60.65	55	84.68	91
Kimball	Stemmons	2	111	53.68	27	75.81	59
Kimball	Stemmons	3	117	63.72	67	85.00	90
Kimball	Stemmons	4	121	51.32	19	79.56	72
Kimball	Tolbert	2	82	37.00	0	69.07	35
Kimball	Tolbert	3	59	19.51	0	81.97	75
Kimball	Webster	2	112	16.81	0	71.67	45

table continues

Table (continued)

High School Feeder	Campus	Grade	n	RM Hours for 2015-16		Accuracy Rates for 2015-16	
				Mean	% Met Target	Mean	% Met Target
Kimball	Webster	3	123	8.99	0	77.30	64
Lincoln	Rhoads	2	106	51.51	33	67.12	36
Lincoln	Rhoads	3	117	39.71	3	79.10	69
Lincoln	Rice	2	85	67.79	76	63.00	25
Lincoln	Rice	3	48	33.52	0	77.47	67
Lincoln	Rice	4	57	10.72	0	70.86	46
Madison	Dunbar	2	104	28.84	8	60.28	19
Madison	Dunbar	3	82	29.50	0	74.09	50
Madison	Dunbar	4	74	10.59	5	74.19	59
Madison	King	2	82	32.62	20	63.67	17
Madison	King	3	82	43.16	13	73.98	54
Madison	King	4	72	22.15	0	68.31	35
Madison	Roberts	2	103	22.55	0	68.60	29
Madison	Roberts	3	95	20.47	0	81.74	80
Madison	Roberts	4	98	19.77	0	72.85	51
Molina	Bethune	2	121	68.73	83	68.18	31
Molina	Bethune	3	135	66.68	80	83.34	86
Molina	Cochran	2	87	75.15	92	69.42	31
Molina	Cochran	3	89	70.34	83	83.77	85
Molina	Cowart	2	90	71.06	88	68.43	36
Molina	Cowart	3	90	68.72	81	82.57	80
Molina	Salazar	2	107	72.91	91	63.54	26
Molina	Salazar	3	97	86.55	99	82.37	82
Molina	Soto	2	90	72.60	96	67.37	30
Molina	Soto	3	91	77.85	95	83.92	88
Molina	Soto	4	99	67.51	75	74.90	58
North Dallas	Chavez	2	89	59.39	73	61.97	10
North Dallas	Chavez	3	78	61.97	54	83.47	81
North Dallas	Hernandez	2	57	65.01	54	61.54	14
North Dallas	Hernandez	3	58	48.61	34	72.67	49
North Dallas	Houston	2	24	64.64	83	72.77	46
North Dallas	Houston	3	41	54.54	20	88.56	93
North Dallas	Kennedy	2	58	65.00	84	70.73	40
North Dallas	Kennedy	3	65	56.83	35	82.30	85
North Dallas	Kennedy	4	65	49.91	3	73.51	48
North Dallas	Maple Lawn	2	83	65.01	83	73.85	48
North Dallas	Maple Lawn	3	83	55.59	39	86.10	89
North Dallas	Medrano, E	2	72	51.71	19	72.40	43
North Dallas	Medrano, E	3	83	54.26	30	85.16	90
North Dallas	Medrano, E	4	70	1.02	0	83.01	75
North Dallas	Milam	2	45	65.72	84	67.31	22
North Dallas	Milam	3	34	72.16	100	89.06	94
North Dallas	Milam	4	45	49.97	11	79.71	80
North Dallas	Ray	2	48	59.28	58	60.93	23
North Dallas	Ray	3	58	49.76	16	77.57	64
North Dallas	Ray	4	49	26.92	0	68.78	41
North Dallas	Zaragoza	2	54	77.45	96	72.04	39
North Dallas	Zaragoza	3	46	71.71	76	84.48	80
North Dallas	Zaragoza	4	41	46.58	15	74.48	63
Pinkston	Allen	2	78	45.48	8	72.25	44
Pinkston	Allen	3	70	54.89	57	84.89	87
Pinkston	Allen	4	74	49.74	11	82.71	78
Pinkston	Arcadia Park	2	118	70.17	88	74.49	48
Pinkston	Arcadia Park	3	108	65.29	78	81.37	82
Pinkston	Arcadia Park	4	113	52.95	24	83.31	82
Pinkston	Carr	2	59	55.07	37	69.75	32
Pinkston	Carr	3	41	78.34	90	79.38	78
Pinkston	Carr	4	38	66.49	76	73.50	50
Pinkston	Carr	5	53	120.31	0	62.28	17
Pinkston	Carver	2	65	62.34	52	57.22	9
Pinkston	Carver	3	69	48.81	12	75.08	54
Pinkston	Carver	4	63	29.14	3	68.60	33
Pinkston	Carver	5	51	91.96	0	60.83	8
Pinkston	De Zavala	2	69	77.29	81	66.42	26
Pinkston	De Zavala	3	47	61.15	47	81.34	85
Pinkston	De Zavala	4	57	72.14	74	78.19	67
Pinkston	Earhart	2	19	75.39	84	70.61	26
Pinkston	Earhart	3	31	72.34	84	80.15	81
Pinkston	Earhart	4	27	69.94	44	73.43	59
Pinkston	Earhart	5	24	176.06	13	71.79	46

table continues

Table (continued)

High School Feeder	Campus	Grade	n	RM Hours for 2015-16		Accuracy Rates for 2015-16	
				Mean	% Met Target	Mean	% Met Target
Pinkston	Lanier	2	63	59.95	44	69.24	33
Pinkston	Lanier	3	80	69.19	93	87.46	94
Pinkston	Lanier	4	104	58.24	35	80.63	79
Pinkston	Martinez	2	57	71.23	89	72.99	44
Pinkston	Martinez	3	65	71.14	85	88.18	100
Pinkston	Martinez	4	58	72.96	91	87.91	98
Pinkston	Martinez	5	71	134.84	0	74.25	49
Pinkston	Stevens Park	2	99	60.40	52	74.58	54
Pinkston	Stevens Park	3	107	47.01	2	83.36	86
Pinkston	Stevens Park	4	87	30.39	0	74.64	56
Pinkston	Stevens Park	5	97	112.03	0	68.59	33
Roosevelt	Bryan	2	72	23.65	3	59.27	15
Roosevelt	Bryan	3	86	35.93	6	79.05	74
Roosevelt	Bryan	4	73	12.47	0	66.90	32
Roosevelt	Budd	2	86	33.65	1	70.79	43
Roosevelt	Budd	3	69	48.43	38	84.70	86
Roosevelt	Budd	4	72	21.29	0	74.24	56
Roosevelt	Johnston	2	68	55.76	51	64.21	25
Roosevelt	Johnston	3	82	23.01	0	83.23	88
Roosevelt	Miller	2	66	52.82	36	66.99	29
Roosevelt	Miller	3	56	62.01	75	81.88	79
Roosevelt	Miller	4	56	50.22	43	77.18	61
Roosevelt	Starks	2	41	56.58	46	70.74	37
Roosevelt	Starks	3	42	59.64	57	83.77	86
Roosevelt	Starks	4	58	51.44	34	73.82	60
Roosevelt	Starks	5	40	92.02	0	83.64	88
Samuell	Adams, J	2	139	46.73	10	73.86	54
Samuell	Adams, J	3	99	52.36	35	80.05	74
Samuell	Adams, J	4	109	30.96	0	76.91	66
Samuell	Hawthorne	2	71	51.64	30	68.47	32
Samuell	Hawthorne	3	64	36.20	2	86.04	88
Samuell	Hawthorne	4	25	26.14	0	79.68	64
Samuell	Ireland	2	90	26.27	0	70.42	42
Samuell	Ireland	3	91	27.15	0	78.85	71
Samuell	Pleasant Grove	2	68	45.71	24	60.29	21
Samuell	Pleasant Grove	3	79	51.75	42	77.45	59
Samuell	Richardson	2	104	27.30	0	69.25	34
Samuell	Richardson	3	110	29.50	0	78.97	72
Samuell	Richardson	4	101	10.90	0	75.79	63
Samuell	Runyon	2	102	68.95	85	68.98	31
Samuell	Runyon	3	105	59.23	44	80.92	78
Samuell	San Jacinto	2	76	44.91	11	64.23	29
Samuell	San Jacinto	3	61	47.37	3	79.88	70
Samuell	San Jacinto	4	69	2.32	0	83.87	72
Samuell	Titche	2	122	50.30	26	65.28	24
Samuell	Titche	3	121	60.61	48	76.25	61
Seagoville	Central	2	81	22.55	0	69.51	44
Seagoville	Central	3	71	35.23	0	84.39	89
Seagoville	Halliday	2	97	41.01	14	69.92	39
Seagoville	Halliday	3	98	57.13	40	81.14	76
Seagoville	Kleberg	2	104	67.22	66	74.75	51
Seagoville	Kleberg	3	103	70.27	83	84.30	83
Seagoville	Kleberg	4	89	77.19	93	76.91	60
Seagoville	Seagoville ES	2	104	42.70	0	74.65	56
Seagoville	Seagoville ES	3	101	21.39	0	85.58	92
Seagoville	Seagoville ES	4	94	17.20	0	75.19	60
Seagoville	Seagoville ES	5	53	80.19	0	70.12	40
Seagoville	Seagoville North	2	118	55.62	44	75.71	59
Seagoville	Seagoville North	3	112	61.88	64	83.23	85
Seagoville	Seagoville North	4	104	63.19	80	79.76	72
Seagoville	Seagoville North	5	107	145.15	7	72.93	43
Skyline	Callejo	2	118	54.96	30	67.68	25
Skyline	Callejo	3	114	41.12	3	83.43	82
Skyline	Conner	2	118	35.50	3	62.81	19
Skyline	Conner	3	125	21.66	0	78.09	71
Skyline	Conner	4	99	21.93	0	69.51	47
Skyline	Guzick	2	106	40.70	12	63.32	20
Skyline	Guzick	3	131	37.21	2	76.93	69
Skyline	Rowe	2	67	51.49	12	64.27	18
Skyline	Rowe	3	96	56.36	36	79.84	72

table continues

Table (continued)

High School Feeder	Campus	Grade	n	RM Hours for 2015-16		Accuracy Rates for 2015-16	
				Mean	% Met Target	Mean	% Met Target
Skyline	Rowe	4	76	48.43	30	74.44	54
Skyline	Silberstein	2	130	48.50	16	65.63	22
Skyline	Silberstein	3	110	48.32	4	83.00	85
Skyline	Silberstein	4	109	3.39	0	80.66	74
Skyline	Tatum	2	88	57.96	45	64.65	23
Skyline	Tatum	3	106	61.97	59	79.97	72
Skyline	Tatum	4	111	43.86	34	70.80	46
Skyline	Truett	2	169	36.60	2	60.75	18
Skyline	Truett	3	177	16.03	0	75.59	58
Skyline	Urban Park	2	98	49.04	5	73.13	45
Skyline	Urban Park	3	98	48.01	22	87.31	94
South Oak Cliff	Bushman	2	89	43.71	7	62.87	16
South Oak Cliff	Bushman	3	75	38.60	4	81.09	80
South Oak Cliff	Bushman	4	56	18.89	0	77.51	63
South Oak Cliff	Holland	2	57	46.93	23	72.19	46
South Oak Cliff	Holland	3	51	63.87	63	87.66	94
South Oak Cliff	Jordan	2	112	53.43	38	59.23	13
South Oak Cliff	Jordan	3	86	53.39	20	83.02	81
South Oak Cliff	Marsalis	2	76	56.08	51	64.30	22
South Oak Cliff	Marsalis	3	88	43.51	2	80.49	75
South Oak Cliff	Marsalis	4	73	27.56	1	71.55	52
South Oak Cliff	Oliver	2	64	51.12	34	66.95	34
South Oak Cliff	Oliver	3	60	63.10	68	81.79	78
South Oak Cliff	Oliver	4	48	49.52	17	70.27	35
South Oak Cliff	Russell	2	118	60.30	53	62.36	19
South Oak Cliff	Russell	3	116	61.40	54	82.51	77
South Oak Cliff	Russell	4	128	53.38	20	73.11	50
South Oak Cliff	Thornton	2	73	41.44	4	66.32	32
South Oak Cliff	Thornton	3	73	60.30	62	79.39	68
South Oak Cliff	Young	2	90	36.04	1	60.40	14
South Oak Cliff	Young	3	90	39.67	0	79.02	67
South Oak Cliff	Young	4	82	32.90	5	68.55	38
Spruce	Anderson, W	2	126	60.93	75	67.07	30
Spruce	Anderson, W	3	122	59.68	60	80.66	75
Spruce	Blair	2	114	30.56	0	70.72	36
Spruce	Blair	3	116	39.65	33	82.15	76
Spruce	Blair	4	100	21.18	0	71.66	54
Spruce	Burleson	2	125	26.52	2	67.20	35
Spruce	Burleson	3	109	22.52	0	82.28	80
Spruce	Cuellar	2	91	35.49	2	66.14	32
Spruce	Cuellar	3	99	24.12	0	83.97	86
Spruce	Dorsey	2	73	39.75	5	68.53	30
Spruce	Dorsey	3	93	66.46	84	84.61	85
Spruce	Douglass	2	80	23.50	0	66.03	33
Spruce	Douglass	3	78	41.05	1	76.26	58
Spruce	Gonzalez	2	101	63.51	72	69.76	33
Spruce	Gonzalez	3	115	63.53	59	88.57	96
Spruce	Gonzalez	4	117	52.59	24	79.42	74
Spruce	Lagow	2	78	21.18	0	74.67	56
Spruce	Lagow	3	61	14.43	0	84.40	87
Spruce	Macon	2	81	48.61	9	72.44	47
Spruce	Macon	3	87	26.59	0	83.00	82
Spruce	Macon	4	78	26.95	0	79.29	68
Spruce	Moseley	2	130	32.43	3	70.07	35
Spruce	Moseley	3	132	20.63	0	84.22	86
Sunset	Hooe	2	67	58.84	42	68.57	36
Sunset	Hooe	3	74	73.64	93	81.25	74
Sunset	Hooe	4	71	53.63	31	78.63	70
Sunset	Jones	2	105	54.96	36	66.24	30
Sunset	Jones	3	116	40.82	0	79.57	73
Sunset	Kahn	2	89	65.63	82	71.51	43
Sunset	Kahn	3	97	55.16	31	83.41	87
Sunset	Peabody	2	91	49.30	29	66.44	31
Sunset	Peabody	3	88	29.74	0	81.56	80
Sunset	Rosemont Prim	2	191	45.26	17	70.68	38
Sunset	Rosemont ES	3	169	44.46	9	82.31	79
Sunset	Winnetka	2	134	60.77	56	75.76	60
Sunset	Winnetka	3	127	45.80	17	84.49	87
White	Adams, N	2	99	45.14	4	71.70	45
White	Adams, N	3	80	43.25	3	85.70	93

table continues

Table (continued)

High School Feeder	Campus	Grade	n	RM Hours for 2015-16		Accuracy Rates for 2015-16	
				Mean	% Met Target	Mean	% Met Target
White	Adams, N	4	72	20.03	0	82.37	83
White	Bush	2	102	60.18	69	68.85	35
White	Bush	3	93	43.29	31	84.18	84
White	Cabell	2	73	66.53	67	71.38	47
White	Cabell	3	94	58.65	47	82.35	78
White	Cabell	4	77	35.18	9	74.28	55
White	Caillet	2	98	76.91	86	66.86	28
White	Caillet	3	105	66.83	51	85.90	90
White	Degolyer	2	56	33.92	0	81.01	80
White	Degolyer	3	51	42.55	0	88.97	92
White	Degolyer	4	54	37.25	11	85.81	85
White	Gooch	2	33	48.00	6	66.79	36
White	Gooch	3	35	63.41	77	82.31	86
White	Gooch	4	38	64.05	68	73.34	47
White	Junkins	2	111	66.64	60	69.22	38
White	Junkins	3	99	64.89	61	87.31	94
White	Junkins	4	81	49.18	26	72.75	52
White	Marcus	2	157	28.26	1	66.41	25
White	Marcus	3	150	32.43	0	80.68	73
White	Marcus	4	142	23.63	0	74.22	57
White	Withers	2	69	65.50	72	78.57	72
White	Withers	3	72	66.64	58	82.68	79
White	Withers	4	60	66.83	67	79.05	73
Wilmer-Hutchins	Ervin	2	94	37.09	19	64.05	31
Wilmer-Hutchins	Ervin	3	102	27.28	0	75.38	58
Wilmer-Hutchins	Wilmer-Hutchins ES	2	174	25.07	0	64.76	32
Wilmer-Hutchins	Wilmer-Hutchins ES	3	135	44.65	6	80.62	75
Wilson	Jackson	2	106	72.69	88	83.98	82
Wilson	Jackson	3	104	43.04	14	87.28	89
Wilson	Jackson	4	98	8.21	0	87.01	84
Wilson	Lakewood	2	167	55.88	37	84.21	86
Wilson	Lakewood	3	160	56.44	33	90.22	96
Wilson	Lee, R	2	55	73.88	95	72.01	45
Wilson	Lee, R	3	55	54.32	33	87.35	96
Wilson	Lee, R	4	16	1.25	0	81.80	73
Wilson	Lipscomb	2	75	65.14	80	70.11	43
Wilson	Lipscomb	3	71	73.29	89	81.69	77
Wilson	Mount Auburn	2	99	68.20	55	72.63	43
Wilson	Mount Auburn	3	120	35.60	4	83.79	87

Note. ¹ Hour target=60 for grades two to four and 205 for grade five. ² Accuracy (Guided Study Level A) target=75 percent or higher.

Appendix C

Appendix C: Campuses with the Highest Level of RM Implementation in 2015-16

High School Feeder	Campus	n	Mean Hours	% Met Hour Target	Mean Accuracy	% Met Accuracy Target
Grade 2						
Hillcrest	Preston Hollow	70	72.12	86	73.22	53
Pinkston	Stevens Park	99	60.40	52	74.58	54
Seagoville	Kleberg	104	67.22	66	74.75	51
Sunset	Winnetka	134	60.77	56	75.76	60
White	Withers	69	65.50	72	78.57	72
Wilson	Jackson	106	72.69	88	83.98	82
Grade 3						
ACE	Blanton	85	68.97	73	81.46	72
Carter	Weiss	70	72.58	80	83.37	89
Hillcrest	Preston Hollow	67	64.22	73	84.13	88
Hillcrest	Rogers	71	76.22	86	83.87	87
Jefferson	Burnet	144	63.19	61	82.09	75
Jefferson	Knight	73	68.17	67	83.93	86
Jefferson	Saldivar	134	57.30	51	83.72	85
Jefferson	Walnut Hill	55	75.62	100	85.90	89
Jefferson	Williams	42	51.39	52	85.99	95
Kimball	Donald	56	61.56	55	79.08	73
Kimball	Henderson	74	71.63	81	84.72	86
Kimball	Moreno	65	60.65	55	84.68	91
Kimball	Stemmons	117	63.72	67	85.00	90
Molina	Bethune	135	66.68	80	83.34	86
Molina	Cochran	89	70.34	83	83.77	85
Molina	Cowart	90	68.72	81	82.57	80
Molina	Salazar	97	86.55	99	82.37	82
Molina	Soto	91	77.85	95	83.92	88
North Dallas	Chavez	78	61.97	54	83.47	81
North Dallas	Milam	34	72.16	100	89.06	94
North Dallas	Zaragoza	46	71.71	76	84.48	80
Pinkston	Allen	70	54.89	57	84.89	87
Pinkston	Arcadia Park	108	65.29	78	81.37	82
Pinkston	Carr	41	78.34	90	79.38	78
Pinkston	Earhart	31	72.34	84	80.15	81
Pinkston	Lanier	80	69.19	93	87.46	94
Pinkston	Martinez	65	71.14	85	88.18	100
Roosevelt	Miller	56	62.01	75	81.88	79
Roosevelt	Starks	42	59.64	57	83.77	86
Seagoville	Kleberg	103	70.27	83	84.30	83
Seagoville	Seagoville North	112	61.88	64	83.23	85
Skyline	Tatum	106	61.97	59	79.97	72
South Oak Cliff	Holland	51	63.87	63	87.66	94
South Oak Cliff	Oliver	60	63.10	68	81.79	78
South Oak Cliff	Russell	116	61.40	54	82.51	77
South Oak Cliff	Thornton	73	60.30	62	79.39	68
Spruce	Anderson, W	122	59.68	60	80.66	75
Spruce	Dorsey	93	66.46	84	84.61	85
Spruce	Gonzalez	115	63.53	59	88.57	96
Sunset	Hooe	74	73.64	93	81.25	74
White	Caillet	105	66.83	51	85.90	90
White	Gooch	35	63.41	77	82.31	86
White	Junkins	99	64.89	61	87.31	94
White	Withers	72	66.64	58	82.68	79
Wilson	Lipscomb	71	73.29	89	81.69	77

table continues

Table (continued)

High School Feeder	Campus	<i>n</i>	Mean Hours	% Met Hour Target	Mean Accuracy	% Met Accuracy Target
Grade 4						
Adams, B	Smith, L	91	61.44	55	80.69	76
Carter	Terry	57	70.64	91	76.61	63
Hillcrest	Preston Hollow	69	59.38	59	78.04	67
Molina	Soto	99	67.51	75	74.90	58
Pinkston	Carr	38	66.49	76	73.50	50
Pinkston	De Zavala	57	72.14	74	78.19	67
Pinkston	Martinez	58	72.96	91	87.91	98
Seagoville	Kleberg	89	77.19	93	76.91	60
Seagoville	Seagoville North	104	63.19	80	79.76	72
White	Withers	60	66.83	67	79.05	73

Note. The highest implementing campuses were selected based on the following criteria: (a) hour mean was at least 80 percent of the expected the hour target, (b) 50 percent or more met the hour target, (c) mean accuracy was 60 percent or higher, and (d) 50 percent or more met the accuracy target (target was 75 percent or higher). Hour target=60 for grades two to four and 205 for grade five. Accuracy (Guided Study Level A) target=75 percent or higher.

Appendix D

Appendix D: Campuses with the Lowest Level of RM Implementation in 2015-16

High School Feeder	Campus	n	Mean Hours	% Met Hour Target	Mean Accuracy	% Met Accuracy Target
Grade 2						
ACE	Lee, U	93	31.13	1	64.59	27
ACE	Pease	93	47.35	24	56.98	8
Adams, B	Casa View	113	22.61	0	73.85	55
Adams, B	Reilly	75	46.29	17	75.02	55
Adams, B	Smith, L	112	43.76	6	71.14	44
Adamson	Botello	83	22.86	0	62.30	14
Adamson	Bowie	74	35.23	0	73.86	55
Adamson	Peeler	67	46.80	15	61.58	16
Carter	Alexander	61	40.09	3	60.34	13
Carter	McNair	118	38.24	4	63.29	27
Carter	Terry	59	34.68	24	72.15	52
Carter	Turner	56	30.82	0	66.10	34
Carter	Twain	55	39.14	0	62.19	24
Conrad	Highland Meadows	141	29.42	0	72.84	47
Conrad	McShan	119	16.94	0	66.79	29
Conrad	Stone, J	69	39.08	4	70.30	32
Jefferson	Cigarroa	110	43.55	18	65.08	22
Jefferson	Field	67	43.43	3	68.38	31
Jefferson	Foster	122	43.35	16	67.31	23
Kimball	Brashear	95	38.07	0	74.88	49
Kimball	Donald	63	32.09	0	68.12	24
Kimball	Hall	81	23.46	0	75.05	60
Kimball	Tolbert	82	37.00	0	69.07	35
Kimball	Webster	112	16.81	0	71.67	45
Madison	Dunbar	104	28.84	8	60.28	19
Madison	King	82	32.62	20	63.67	17
Madison	Roberts	103	22.55	0	68.60	29
Pinkston	Allen	78	45.48	8	72.25	44
Roosevelt	Bryan	72	23.65	3	59.27	15
Roosevelt	Budd	86	33.65	1	70.79	43
Samuell	Adams, J	139	46.73	10	73.86	54
Samuell	Ireland	90	26.27	0	70.42	42
Samuell	Pleasant Grove	68	45.71	24	60.29	21
Samuell	Richardson	104	27.30	0	69.25	34
Samuell	San Jacinto	76	44.91	11	64.23	29
Seagoville	Central	81	22.55	0	69.51	44
Seagoville	Halliday	97	41.01	14	69.92	39
Seagoville	Seagoville ES	104	42.70	0	74.65	56
Skyline	Conner	118	35.50	3	62.81	19
Skyline	Guzick	106	40.70	12	63.32	20
Skyline	Truett	169	36.60	2	60.75	18
South Oak Cliff	Bushman	89	43.71	7	62.87	16
South Oak Cliff	Holland	57	46.93	23	72.19	46
South Oak Cliff	Thornton	73	41.44	4	66.32	32
South Oak Cliff	Young	90	36.04	1	60.40	14
Spruce	Blair	114	30.56	0	70.72	36
Spruce	Burleson	125	26.52	2	67.20	35
Spruce	Cuellar	91	35.49	2	66.14	32
Spruce	Dorsey	73	39.75	5	68.53	30
Spruce	Douglass	80	23.50	0	66.03	33
Spruce	Lagow	78	21.18	0	74.67	56
Spruce	Moseley	130	32.43	3	70.07	35
Sunset	Rosemont Prim	191	45.26	17	70.68	38
White	Adams, N	99	45.14	4	71.70	45
White	Degolyer	56	33.92	0	81.01	80
White	Marcus	157	28.26	1	66.41	25

table continues

Table (continued)

High School Feeder	Campus	n	Mean Hours	% Met Hour Target	Mean Accuracy	% Met Accuracy Target
Grade 2						
Wilmer-Hutchins	Ervin	94	37.09	19	64.05	31
Wilmer-Hutchins	Wilmer-Hutchins	174	25.07	0	64.76	32
Grade 3						
ACE	Pease	98	40.47	7	76.99	67
Adams, B	Casa View	113	26.88	0	83.59	85
Adams, B	Reilly	97	34.00	0	85.06	86
Adamson	Botello	89	46.56	0	81.33	75
Adamson	Bowie	68	43.77	6	81.69	78
Adamson	Hogg	36	47.98	8	77.43	61
Adamson	Peeler	48	41.34	4	82.58	81
Adamson	Reagan	60	30.44	3	84.62	87
Carter	Alexander	59	28.42	0	80.19	75
Carter	McNair	118	44.86	7	81.06	75
Carter	Terry	32	11.16	0	88.83	94
Carter	Turner	52	24.47	0	81.37	71
Carter	Twain	39	30.37	0	74.79	62
Conrad	Highland Meadows	105	18.67	0	81.63	77
Conrad	Hotchkiss	123	23.66	1	78.29	70
Conrad	McShan	87	25.12	0	78.40	71
Conrad	Stone, J	50	45.35	12	81.65	78
Hillcrest	Frank	175	45.29	6	83.11	87
Jefferson	Foster	136	41.49	6	81.10	75
Kimball	Brashear	108	24.64	0	89.40	96
Kimball	Carpenter	51	38.06	2	81.54	84
Kimball	Hall	88	22.29	0	84.45	89
Kimball	Tolbert	59	19.51	0	81.97	75
Kimball	Webster	123	8.99	0	77.30	64
Lincoln	Rhoads	117	39.71	3	79.10	69
Lincoln	Rice	48	33.52	0	77.47	67
Madison	Dunbar	82	29.50	0	74.09	50
Madison	King	82	43.16	13	73.98	54
Madison	Roberts	95	20.47	0	81.74	80
Pinkston	Stevens Park	107	47.01	2	83.36	86
Roosevelt	Bryan	86	35.93	6	79.05	74
Roosevelt	Johnston	82	23.01	0	83.23	88
Samuell	Hawthorne	64	36.20	2	86.04	88
Samuell	Ireland	91	27.15	0	78.85	71
Samuell	Richardson	110	29.50	0	78.97	72
Samuell	San Jacinto	61	47.37	3	79.88	70
Seagoville	Central	71	35.23	0	84.39	89
Seagoville	Seagoville ES	101	21.39	0	85.58	92
Skyline	Callejo	114	41.12	3	83.43	82
Skyline	Conner	125	21.66	0	78.09	71
Skyline	Guzick	131	37.21	2	76.93	69
Skyline	Truett	177	16.03	0	75.59	58
South Oak Cliff	Bushman	75	38.60	4	81.09	80
South Oak Cliff	Marsalis	88	43.51	2	80.49	75
South Oak Cliff	Young	90	39.67	0	79.02	67
Spruce	Blair	116	39.65	33	82.15	76
Spruce	Burleson	109	22.52	0	82.28	80
Spruce	Cuellar	99	24.12	0	83.97	86
Spruce	Douglass	78	41.05	1	76.26	58
Spruce	Lagow	61	14.43	0	84.40	87
Spruce	Macon	87	26.59	0	83.00	82
Spruce	Moseley	132	20.63	0	84.22	86
Sunset	Jones	116	40.82	0	79.57	73
Sunset	Peabody	88	29.74	0	81.56	80
Sunset	Rosemont ES	169	44.46	9	82.31	79
Sunset	Winnetka	127	45.80	17	84.49	87

table continues

Table (continued)

High School Feeder	Campus	n	Mean Hours	% Met Hour Target	Mean Accuracy	% Met Accuracy Target
Grade 3						
White	Adams, N	80	43.25	3	85.70	93
White	Bush	93	43.29	31	84.18	84
White	Degolyer	51	42.55	0	88.97	92
White	Marcus	150	32.43	0	80.68	73
Wilmer-Hutchins	Ervin	102	27.28	0	75.38	58
Wilmer-Hutchins	Wilmer-Hutchins	135	44.65	6	80.62	75
Wilson	Jackson	104	43.04	14	87.28	89
Wilson	Mount Auburn	120	35.60	4	83.79	87
Grade 4						
ACE	Blanton	91	16.88	0	75.54	63
ACE	Lee, U	88	22.81	0	66.59	36
ACE	Mills	65	20.11	3	69.75	51
ACE	Pease	15	5.66	0	69.20	33
Adams, B	Bayles	89	36.12	1	74.43	55
Adams, B	Casa View	28	0.66	0	88.65	83
Adams, B	Hexter	76	5.12	0	82.72	80
Adams, B	Kiest	46	0.49	0	79.40	75
Adamson	Botello	79	13.33	0	78.37	72
Adamson	Hogg	37	41.50	0	77.93	73
Adamson	Reagan	62	31.37	0	71.69	44
Carter	Alexander	53	9.53	0	66.25	47
Carter	McNair	103	8.94	0	71.52	51
Carter	Twain	75	29.70	0	67.13	32
Conrad	Highland Meadows	126	22.26	0	72.12	48
Conrad	Lowe	91	27.95	10	69.68	44
Conrad	McShan	86	46.33	26	72.91	47
Jefferson	Burnet	137	11.12	0	82.29	74
Jefferson	Williams	45	30.76	0	75.31	60
Kimball	Donald	55	28.77	0	74.04	55
Kimball	Hall	63	20.54	0	73.99	59
Lincoln	Rice	57	10.72	0	70.86	46
Madison	Dunbar	74	10.59	5	74.19	59
Madison	King	72	22.15	0	68.31	35
Madison	Roberts	98	19.77	0	72.85	51
North Dallas	Medrano, E	70	1.02	0	83.01	75
North Dallas	Ray	49	26.92	0	68.78	41
North Dallas	Zaragoza	41	46.58	15	74.48	63
Pinkston	Carver	63	29.14	3	68.60	33
Pinkston	Stevens Park	87	30.39	0	74.64	56
Roosevelt	Bryan	73	12.47	0	66.90	32
Roosevelt	Budd	72	21.29	0	74.24	56
Samuell	Adams, J	109	30.96	0	76.91	66
Samuell	Hawthorne	25	26.14	0	79.68	64
Samuell	Richardson	101	10.90	0	75.79	63
Samuell	San Jacinto	69	2.32	0	83.87	72
Seagoville	Seagoville ES	94	17.20	0	75.19	60
Skyline	Conner	99	21.93	0	69.51	47
Skyline	Silberstein	109	3.39	0	80.66	74
Skyline	Tatum	111	43.86	34	70.80	46
South Oak Cliff	Bushman	56	18.89	0	77.51	63
South Oak Cliff	Marsalis	73	27.56	1	71.55	52
South Oak Cliff	Young	82	32.90	5	68.55	38
Spruce	Blair	100	21.18	0	71.66	54
Spruce	Macon	78	26.95	0	79.29	68
White	Adams, N	72	20.03	0	82.37	83
White	Cabell	77	35.18	9	74.28	55
White	Degolyer	54	37.25	11	85.81	85
White	Marcus	142	23.63	0	74.22	57

table continues

Table (continued)

High School Feeder	Campus	<i>n</i>	Mean Hours	% Met Hour Target	Mean Accuracy	% Met Accuracy Target
Grade 4						
Wilson	Jackson	98	8.21	0	87.01	84
Wilson	Lee, R	16	1.25	0	81.80	73
Grade 5						
Hillcrest	Preston Hollow	53	157.30	0	75.34	57
Jefferson	Williams	29	136.37	0	63.45	17
Kimball	Donald	56	89.68	0	65.62	20
Kimball	Henderson	65	101.55	0	77.10	61
Pinkston	Carr	53	120.31	0	62.28	17
Pinkston	Carver	51	91.96	0	60.83	8
Pinkston	Martinez	71	134.84	0	74.25	49
Pinkston	Stevens Park	97	112.03	0	68.59	33
Roosevelt	Starks	40	92.02	0	83.64	88
Seagoville	Seagoville ES	53	80.19	0	70.12	40
Seagoville	Seagoville North	107	145.15	7	72.93	43

Note. Low implementing campuses were selected based on the following criteria: (a) mean hours were less than 80 percent of the hour targets, and (b) 49 percent or fewer met the hour target. Hour target=60 for grades two to four and 205 for grade five. Accuracy (Guided Study Level A) target=75 percent or higher.

Appendix E

Appendix E: 2015-16 RM Student Hour Descriptive Statistics Overall, by Feeder Pattern, and by Grade

Descriptor	Second Grade	Third Grade	Fourth Grade	Fifth Grade
All*				
Number of students	13,078	12,848	6,152	811
Frequencies of hours				
Met Target	35%	29%	17%	6%
Almost Met	20%	22%	14%	16%
Did Not Meet	45%	49%	69%	78%
Range of hours	0.06-227.06	0.10-227.14	0.06-132.84	0.45-261.87
Mean hours	50.16	47.69	33.93	128.98
Standard deviation of hours	21.35	20.74	23.65	46.62
ACE				
Number of students	318	343	259	N/A
Frequencies of hours				
Met Target	25%	32%	1%	N/A
Almost Met	22%	21%	2%	N/A
Did Not Meet	53%	47%	97%	N/A
Range of hours	0.70-116.97	3.40-104.16	0.08-77.39	N/A
Mean hours	47.16	52.24	19.05	N/A
Standard deviation of hours	21.01	17.93	12.76	N/A
Adams				
Number of students	882	909	336	112
Frequencies of hours				
Met Target	27%	18%	15%	33%
Almost Met	33%	34%	10%	49%
Did Not Meet	40%	48%	75%	18%
Range of hours	1.05-110.57	0.37-105.14	0.07-97.68	34.96-261.87
Mean hours	50.01	46.91	27.60	191.87
Standard deviation of hours	18.16	15.06	26.66	38.81
Adamson				
Number of students	316	301	243	N/A
Frequencies of hours				
Met Target	16%	4%	5%	N/A
Almost Met	15%	29%	14%	N/A
Did Not Meet	69%	67%	81%	N/A
Range of hours	0.78-86.33	7.64-78.07	0.27-92.88	N/A
Mean hours	40.59	42.05	31.59	N/A
Standard deviation of hours	16.49	11.73	17.34	N/A
Carter				
Number of students	423	370	298	N/A
Frequencies of hours				
Met Target	9%	17%	18%	N/A
Almost Met	24%	12%	2%	N/A
Did Not Meet	67%	71%	80%	N/A
Range of hours	0.06-83.22	1.52-227.14	0.06-89.40	N/A
Mean hours	39.60	40.18	25.82	N/A
Standard deviation of hours	16.85	24.08	24.88	N/A
Conrad				
Number of students	570	459	353	N/A
Frequencies of hours				
Met Target	32%	11%	15%	N/A
Almost Met	14%	11%	16%	N/A
Did Not Meet	54%	78%	69%	N/A
Range of hours	1.28-197.36	2.71-107.35	0.28-77.24	N/A
Mean hours	45.99	32.51	34.13	N/A
Standard deviation of hours	28.78	18.78	19.59	N/A

table continues

Table (continued)

Descriptor	Second Grade	Third Grade	Fourth Grade	Fifth Grade
Hillcrest				
Number of students	487	462	76	53
Frequencies of hours				
Met Target	64%	34%	54%	0%
Almost Met	20%	35%	18%	49%
Did Not Meet	16%	31%	28%	51%
Range of hours	2.16-146.62	12.60-136.44	1.58-82.10	33.19-197.76
Mean hours	64.65	55.33	54.69	157.30
Standard deviation of hours	19.33	17.51	19.26	28.99
Jefferson				
Number of students	790	817	239	29
Frequencies of hours				
Met Target	43%	43%	0%	0%
Almost Met	25%	30%	15%	7%
Did Not Meet	32%	27%	85%	93%
Range of hours	6.42-122.48	1.83-99.82	0.88-58.99	103.51-188.41
Mean hours	57.21	56.20	22.15	136.37
Standard deviation of hours	19.62	15.93	16.94	17.85
Kimball				
Number of students	733	741	329	121
Frequencies of hours				
Met Target	19%	28%	15%	0%
Almost Met	19%	14%	30%	1%
Did Not Meet	62%	58%	55%	99%
Range of hours	0.67-97.65	0.1-115.83	0.14-95.95	0.45-164.95
Mean hours	41.21	39.09	41.35	96.06
Standard deviation of hours	20.06	25.41	18.76	32.36
Lincoln				
Number of students	191	165	60	N/A
Frequencies of hours				
Met Target	52%	2%	0%	N/A
Almost Met	30%	11%	0%	N/A
Did Not Meet	18%	87%	100%	N/A
Range of hours	3.37-108.11	0.76-87.88	0.08-30.54	N/A
Mean hours	58.76	37.91	10.68	N/A
Standard deviation of hours	17.23	11.44	7.49	N/A
Madison				
Number of students	289	259	244	N/A
Frequencies of hours				
Met Target	8%	4%	2%	N/A
Almost Met	6%	6%	0%	N/A
Did Not Meet	86%	90%	98%	N/A
Range of hours	0.63-92.47	4.41-87.67	0.15-82.51	N/A
Mean hours	27.67	30.51	17.69	N/A
Standard deviation of hours	19.67	14.62	11.70	N/A
Molina				
Number of students	495	502	110	N/A
Frequencies of hours				
Met Target	90%	87%	68%	N/A
Almost Met	8%	10%	21%	N/A
Did Not Meet	2%	3%	11%	N/A
Range of hours	4.46-100.26	19.48-125.15	0.36-96.40	N/A
Mean hours	71.89	73.56	62.94	N/A
Standard deviation of hours	11.38	13.49	18.38	N/A

table continues

Table (continued)

Descriptor	Second Grade	Third Grade	Fourth Grade	Fifth Grade
North Dallas				
Number of students	530	546	283	N/A
Frequencies of hours				
Met Target	69%	42%	5%	N/A
Almost Met	17%	33%	30%	N/A
Did Not Meet	14%	25%	65%	N/A
Range of hours	1.37-153.75	3.15-109.70	0.10-81.86	N/A
Mean hours	63.05	57.40	31.64	N/A
Standard deviation of hours	16.76	16.35	22.52	N/A
Pinkston				
Number of students	627	618	621	296
Frequencies of hours				
Met Target	59%	56%	34%	1%
Almost Met	24%	21%	24%	6%
Did Not Meet	17%	23%	42%	93%
Range of hours	6.36-117.82	14.68-107.13	0.98-132.84	25.15-218.83
Mean hours	63.33	61.13	53.07	120.72
Standard deviation of hours	16.69	15.41	21.21	30.83
Roosevelt				
Number of students	333	335	262	40
Frequencies of hours				
Met Target	24%	29%	17%	0%
Almost Met	14%	11%	9%	0%
Did Not Meet	62%	60%	74%	100%
Range of hours	3.17-110.84	2.88-123.04	2.10-76.81	6.11-124.62
Mean hours	42.63	42.67	31.60	92.02
Standard deviation of hours	18.98	25.52	21.16	35.67
Samuell				
Number of students	772	730	312	N/A
Frequencies of hours				
Met Target	23%	24%	0%	N/A
Almost Met	19%	24%	0%	N/A
Did Not Meet	58%	52%	100%	N/A
Range of hours	1.55-102.89	0.61-97.32	0.07-54.48	N/A
Mean hours	45.41	46.23	17.35	N/A
Standard deviation of hours	19.82	17.00	13.19	N/A
Seagoville				
Number of students	504	485	293	160
Frequencies of hours				
Met Target	27%	41%	57%	5%
Almost Met	21%	21%	3%	21%
Did Not Meet	52%	38%	40%	74%
Range of hours	4.54-147.95	2.00-149.48	2.04-113.40	3.61-240.38
Mean hours	47.22	50.37	51.54	123.64
Standard deviation of hours	20.88	22.89	29.32	49.37
Skyline				
Number of students	894	957	413	N/A
Frequencies of hours				
Met Target	15%	14%	15%	N/A
Almost Met	29%	21%	6%	N/A
Did Not Meet	56%	65%	79%	N/A
Range of hours	1.35-95.97	0.22-85.44	0.10-110.11	N/A
Mean hours	45.68	38.77	27.19	N/A
Standard deviation of hours	14.43	19.42	22.55	N/A

table continues

Table (continued)

Descriptor	Second Grade	Third Grade	Fourth Grade	Fifth Grade
South Oak Cliff				
Number of students	679	639	392	N/A
Frequencies of hours				
Met Target	28%	32%	10%	N/A
Almost Met	25%	27%	24%	N/A
Did Not Meet	47%	41%	66%	N/A
Range of hours	0.54-97.68	1.69-95.51	0.32-96.42	N/A
Mean hours	49.29	52.35	38.31	N/A
Standard deviation of hours	16.16	15.86	20.23	N/A
Spruce				
Number of students	999	1012	310	N/A
Frequencies of hours				
Met Target	19%	25%	9%	N/A
Almost Met	15%	12%	16%	N/A
Did Not Meet	66%	63%	75%	N/A
Range of hours	0.10-95.80	1.14-91.61	0.53-82.31	N/A
Mean hours	38.75	38.86	33.93	N/A
Standard deviation of hours	18.79	21.70	18.97	N/A
Sunset				
Number of students	677	671	77	N/A
Frequencies of hours				
Met Target	40%	20%	29%	N/A
Almost Met	23%	19%	39%	N/A
Did Not Meet	37%	61%	32%	N/A
Range of hours	0.08-100.24	1.48-131.16	0.23-71.91	N/A
Mean hours	54.40	46.92	50.06	N/A
Standard deviation of hours	16.33	15.98	17.26	N/A
White				
Number of students	798	779	527	N/A
Frequencies of hours				
Met Target	41%	33%	19%	N/A
Almost Met	17%	23%	13%	N/A
Did Not Meet	42%	44%	68%	N/A
Range of hours	0.33-144.55	2.18-132.63	0.22-101.04	N/A
Mean hours	53.68	51.98	37.97	N/A
Standard deviation of hours	21.88	20.37	20.81	N/A
Wilmer-Hutchins				
Number of students	268	237	N/A	N/A
Frequencies of hours				
Met Target	7%	3%	N/A	N/A
Almost Met	4%	24%	N/A	N/A
Did Not Meet	89%	73%	N/A	N/A
Range of hours	0.64-83.24	3.00-65.08	N/A	N/A
Mean hours	29.29	37.17	N/A	N/A
Standard deviation of hours	16.28	14.77	N/A	N/A
Wilson				
Number of students	502	510	114	N/A
Frequencies of hours				
Met Target	64%	30%	0%	N/A
Almost Met	21%	26%	0%	N/A
Did Not Meet	15%	44%	100%	N/A
Range of hours	3.52-227.26	0.18-215.48	0.55-15.05	N/A
Mean hours	65.21	50.92	7.23	N/A
Standard deviation of hours	20.19	18.76	3.39	N/A

Note. Met=Logged 100 percent of expected hours (60 for grades two to four and 205 for grade five). Almost Met=Logged 80 to 99 percent of expected hours. Did Not Meet=Logged less than 80 percent of expected hours. N/A=Not applicable. *All included Hospital/Homebound students ($n=1$ for each grade from grades 2 to 4).

Appendix F

Appendix F: 2015-16 RM Student Guided Study Level A Accuracy Descriptive Statistics Overall, by Feeder Pattern, and by Grade

Descriptor	Second Grade	Third Grade	Fourth Grade	Fifth Grade
All*				
Number of students	13,076	12,845	6,089	810
Frequencies (accuracy rates)				
Met Target	36%	80%	60%	42%
Almost Met	39%	16%	27%	40%
Did Not Meet	25%	4%	13%	18%
Range of accuracy	0-100	10-100	0-100	30-98
Mean accuracy	68.72	82.19	75.70	71.24
Standard deviation of accuracy	13.63	10.75	14.81	12.14
ACE				
Number of students	318	343	258	N/A
Frequencies (accuracy rates)				
Met Target	24%	70%	49%	N/A
Almost Met	41%	26%	29%	N/A
Did Not Meet	35%	4%	22%	N/A
Range of accuracy	0-96	24-97	16-100	N/A
Mean accuracy	64.20	79.11	70.66	N/A
Standard deviation of accuracy	14.52	10.94	16.26	N/A
Adams				
Number of students	882	909	325	112
Frequencies (accuracy rates)				
Met Target	42%	84%	71%	54%
Almost Met	39%	13%	21%	34%
Did Not Meet	19%	3%	8%	12%
Range of accuracy	31-99	32-99	0-100	41-95
Mean accuracy	71.50	83.61	79.49	74.54
Standard deviation of accuracy	12.61	9.66	15.59	12.03
Adamson				
Number of students	316	301	243	N/A
Frequencies (accuracy rates)				
Met Target	28%	77%	61%	N/A
Almost Met	41%	20%	28%	N/A
Did Not Meet	31%	3%	11%	N/A
Range of accuracy	13-94	40-99	26-100	N/A
Mean accuracy	66.16	81.80	76.07	N/A
Standard deviation of accuracy	14.40	9.49	12.53	N/A
Carter				
Number of students	422	370	295	N/A
Frequencies (accuracy rates)				
Met Target	27%	77%	49%	N/A
Almost Met	37%	18%	31%	N/A
Did Not Meet	36%	5%	20%	N/A
Range of accuracy	17-95	21-99	12-100	N/A
Mean accuracy	64.64	81.41	71.07	N/A
Standard deviation of accuracy	14.98	11.72	17.69	N/A
Conrad				
Number of students	570	459	353	N/A
Frequencies (accuracy rates)				
Met Target	33%	74%	47%	N/A
Almost Met	42%	18%	36%	N/A
Did Not Meet	25%	8%	17%	N/A
Range of accuracy	16-95	10-98	0-100	N/A
Mean accuracy	68.31	79.71	71.29	N/A
Standard deviation of accuracy	13.03	12.6	14.65	N/A

table continues

Table (continued)

Descriptor	Second Grade	Third Grade	Fourth Grade	Fifth Grade
Hillcrest				
Number of students	487	462	76	53
Frequencies (accuracy rates)				
Met Target	43%	84%	64%	57%
Almost Met	44%	14%	32%	36%
Did Not Meet	13%	2%	4%	7%
Range of accuracy	29-98	46-98	29-96	44-91
Mean accuracy	72.23	82.75	77.22	75.34
Standard deviation of accuracy	11.21	9.00	11.11	9.89
Jefferson				
Number of students	790	817	225	29
Frequencies (accuracy rates)				
Met Target	30%	82%	73%	17%
Almost Met	43%	16%	14%	52%
Did Not Meet	27%	2%	13%	31%
Range of accuracy	17-96	35-98	21-100	37-81
Mean accuracy	67.61	83.06	80.60	63.45
Standard deviation of accuracy	12.86	9.51	16.95	11.12
Kimball				
Number of students	733	740	327	120
Frequencies (accuracy rates)				
Met Target	43%	83%	67%	42%
Almost Met	41%	13%	23%	44%
Did Not Meet	16%	4%	10%	14%
Range of accuracy	22-97	22-100	32-100	36-97
Mean accuracy	71.81	83.32	77.40	71.74
Standard deviation of accuracy	12.62	11.28	11.89	11.30
Lincoln				
Number of students	191	165	59	N/A
Frequencies (accuracy rates)				
Met Target	31%	69%	46%	N/A
Almost Met	32%	22%	32%	N/A
Did Not Meet	37%	9%	22%	N/A
Range of accuracy	19-94	38-98	21-100	N/A
Mean accuracy	65.29	78.62	70.51	N/A
Standard deviation of accuracy	15.37	12.48	15.98	N/A
Madison				
Number of students	289	259	243	N/A
Frequencies (accuracy rates)				
Met Target	22%	62%	49%	N/A
Almost Met	48%	28%	29%	N/A
Did Not Meet	30%	10%	22%	N/A
Range of accuracy	0-100	36-97	9-100	N/A
Mean accuracy	64.21	76.86	71.91	N/A
Standard deviation of accuracy	14.64	12.22	16.66	N/A
Molina				
Number of students	495	502	109	N/A
Frequencies (accuracy rates)				
Met Target	31%	84%	57%	N/A
Almost Met	41%	14%	32%	N/A
Did Not Meet	28%	2%	11%	N/A
Range of accuracy	25-95	32-99	33-100	N/A
Mean accuracy	67.29	83.20	75.12	N/A
Standard deviation of accuracy	12.87	8.98	13.06	N/A

table continues

Table (continued)

Descriptor	Second Grade	Third Grade	Fourth Grade	Fifth Grade
North Dallas				
Number of students	530	545	275	N/A
Frequencies (accuracy rates)				
Met Target	31%	81%	61%	N/A
Almost Met	43%	16%	27%	N/A
Did Not Meet	26%	3%	12%	N/A
Range of accuracy	19-96	36-98	0-100	N/A
Mean accuracy	68.03	83.05	76.15	N/A
Standard deviation of accuracy	13.16	10.46	15.53	N/A
Pinkston				
Number of students	627	618	621	296
Frequencies (accuracy rates)				
Met Target	38%	83%	70%	31%
Almost Met	41%	14%	24%	42%
Did Not Meet	21%	3%	6%	27%
Range of accuracy	24-99	33-98	0-100	30-95
Mean accuracy	70.32	82.72	79.01	67.74
Standard deviation of accuracy	12.72	9.64	12.04	12.31
Roosevelt				
Number of students	333	335	262	40
Frequencies (accuracy rates)				
Met Target	30%	82%	50%	88%
Almost Met	38%	15%	32%	10%
Did Not Meet	32%	3%	18%	2%
Range of accuracy	20-92	43-98	16-97	50-98
Mean accuracy	66.20	82.30	72.45	83.64
Standard deviation of accuracy	13.61	9.87	14.77	8.65
Samuell				
Number of students	772	729	296	N/A
Frequencies (accuracy rates)				
Met Target	35%	71%	65%	N/A
Almost Met	38%	24%	26%	N/A
Did Not Meet	27%	5%	9%	N/A
Range of accuracy	26-97	20-99	28-100	N/A
Mean accuracy	68.20	79.46	77.67	N/A
Standard deviation of accuracy	13.26	10.97	13.52	N/A
Seagoville				
Number of students	504	485	293	160
Frequencies (accuracy rates)				
Met Target	50%	85%	64%	42%
Almost Met	35%	12%	28%	46%
Did Not Meet	15%	3%	8%	12%
Range of accuracy	21-97	38-99	39-100	43-96
Mean accuracy	73.18	83.69	77.18	72.00
Standard deviation of accuracy	13.10	10.06	11.44	10.63
Skyline				
Number of students	894	957	413	N/A
Frequencies (accuracy rates)				
Met Target	23%	74%	55%	N/A
Almost Met	42%	20%	27%	N/A
Did Not Meet	35%	6%	18%	N/A
Range of accuracy	23-96	18-100	0-100	N/A
Mean accuracy	64.96	80.00	73.74	N/A
Standard deviation of accuracy	13.18	11.78	15.65	N/A

table continues

Table (continued)

Descriptor	Second Grade	Third Grade	Fourth Grade	Fifth Grade
South Oak Cliff				
Number of students	679	639	391	N/A
Frequencies (accuracy rates)				
Met Target	22%	77%	48%	N/A
Almost Met	38%	19%	34%	N/A
Did Not Meet	40%	4%	18%	N/A
Range of accuracy	16-94	25-98	0-100	N/A
Mean accuracy	63.55	81.63	72.22	N/A
Standard deviation of accuracy	13.43	10.69	15.50	N/A
Spruce				
Number of students	998	1012	309	N/A
Frequencies (accuracy rates)				
Met Target	36%	81%	64%	N/A
Almost Met	41%	15%	22%	N/A
Did Not Meet	23%	4%	14%	N/A
Range of accuracy	19-97	13-99	0-99	N/A
Mean accuracy	69.13	83.14	76.28	N/A
Standard deviation of accuracy	13.14	11.43	14.89	N/A
Sunset				
Number of students	677	671	77	N/A
Frequencies (accuracy rates)				
Met Target	40%	80%	72%	N/A
Almost Met	39%	17%	23%	N/A
Did Not Meet	21%	3%	5%	N/A
Range of accuracy	22-98	23-99	55-100	N/A
Mean accuracy	70.33	82.19	79.42	N/A
Standard deviation of accuracy	12.76	9.82	9.46	N/A
White				
Number of students	798	779	527	N/A
Frequencies (accuracy rates)				
Met Target	42%	84%	64%	N/A
Almost Met	36%	13%	25%	N/A
Did Not Meet	22%	3%	11%	N/A
Range of accuracy	20-97	19-99	19-99	N/A
Mean accuracy	70.37	84.16	76.80	N/A
Standard deviation of accuracy	13.47	10.09	13.55	N/A
Wilmer-Hutchins				
Number of students	268	237	N/A	N/A
Frequencies (accuracy rates)				
Met Target	32%	68%	N/A	N/A
Almost Met	35%	22%	N/A	N/A
Did Not Meet	33%	10%	N/A	N/A
Range of accuracy	18-94	33-99	N/A	N/A
Mean accuracy	64.51	78.36	N/A	N/A
Standard deviation of accuracy	15.95	13.12	N/A	N/A
Wilson				
Number of students	502	510	111	N/A
Frequencies (accuracy rates)				
Met Target	66%	90%	83%	N/A
Almost Met	26%	9%	11%	N/A
Did Not Meet	8%	1%	6%	N/A
Range of accuracy	9-98	37-100	40-100	N/A
Mean accuracy	78.44	86.61	86.30	N/A
Standard deviation of accuracy	12.00	8.93	14.42	N/A

Note. Met=Attained Guided Study Level A accuracy rate of 75 percent or higher. Almost Met=Accuracy rate between 60 and 74 percent. Did Not Meet=Accuracy rate of less than 60 percent. N/A=Not applicable. *All included Hospital/Homebound students (n=1 for each grade from grades 2 to 4).

Appendix G

Appendix G: Number and Percentage of Teachers that Completed the RM Qualification Course by Feeder Pattern and Time Period

High School Feeder	Before School Started <i>n</i> (%)	During First Six Weeks <i>n</i> (%)	After First Six Weeks <i>n</i> (%)	Not Trained <i>n</i> (%)	Total <i>n</i> (%)
ACE	0 (0)	3 (21)	7 (50)	4 (29)	14 (100)
Adams	5 (13)	22 (58)	5 (13)	6 (16)	38 (100)
Adamson	2 (13)	4 (27)	7 (47)	2 (13)	15 (100)
Carter	4 (17)	5 (21)	5 (21)	10 (41)	24 (100)
Conrad	7 (44)	5 (31)	1 (6)	3 (19)	16 (100)
Hillcrest	13 (46)	11 (39)	1 (4)	3 (11)	28 (100)
Jefferson	4 (11)	23 (60)	2 (5)	9 (24)	38 (100)
Kimball	7 (21)	15 (44)	9 (26)	3 (9)	34 (100)
Lincoln	2 (50)	0 (0)	2 (50)	0 (0)	4 (100)
Madison	4 (31)	3 (23)	4 (31)	2 (15)	13 (100)
Molina	4 (24)	7 (41)	2 (11)	4 (24)	17 (100)
North Dallas	4 (17)	11 (46)	2 (8)	7 (29)	24 (100)
Pinkston	13 (21)	26 (43)	10 (16)	12 (20)	61 (100)
Roosevelt	7 (43)	2 (13)	5 (31)	2 (13)	16 (100)
Samuell	8 (23)	24 (69)	3 (8)	0 (0)	35 (100)
Seagoville	14 (45)	8 (26)	4 (13)	5 (16)	31 (100)
Skyline	6 (22)	13 (48)	3 (11)	5 (19)	27 (100)
South Oak Cliff	4 (11)	14 (39)	9 (25)	9 (25)	36 (100)
Spruce	2 (6)	13 (35)	13 (35)	9 (24)	37 (100)
Sunset	3 (19)	9 (56)	3 (19)	1 (6)	16 (100)
White	6 (23)	11 (42)	7 (27)	2 (8)	26 (100)
Wilmer-Hutchins	2 (17)	2 (17)	6 (50)	2 (16)	12 (100)
Wilson	7 (27)	12 (46)	4 (15)	3 (12)	26 (100)
All	129 (22)	243 (41)	114 (19)	103 (18)	589 (100)

Note. Some percentages may not add to 100 due to rounding. All included one teacher that taught in the Disciplinary Alternative Education Program (DAEP). These numbers were current as of the end of the fall semester.

Appendix H

Appendix H: Number of Supplemental Classroom Walkthroughs by Grade, Feeder Pattern, and Campus

High School Feeder	Campus	RM Used			RM Not Used			All		
		Second Grade	Third Grade	Total	Second Grade	Third Grade	Total	Second Grade	Third Grade	Total
ACE	Blanton	3	3	6	0	0	0	3	3	6
ACE	Lee, U	2	3	5	2	0	2	4	3	7
ACE	Mills	2	2	4	0	0	0	2	2	4
ACE	Pease	2	2	4	0	0	0	2	2	4
ACE	<i>Total</i>	9	10	19	2	0	2	11	10	21
Adams, B	Bayles	5	4	9	0	0	0	5	4	9
Adams, B	Casa View	1	3	4	1	0	1	2	3	5
Adams, B	Gill	4	2	6	1	0	1	5	2	7
Adams, B	Hexter	3	2	5	0	0	0	3	2	5
Adams, B	Kiest	2	2	4	1	0	1	3	2	5
Adams, B	Reilly	4	2	6	1	0	1	5	2	7
Adams, B	Reinhardt	2	2	4	0	0	0	2	2	4
Adams, B	Sanger	2	2	4	1	0	1	3	2	5
Adams, B	Smith, L	4	2	6	0	0	0	4	2	6
Adams, B	<i>Total</i>	27	21	48	5	0	5	32	21	53
Adamson	Botello	6	5	11	0	0	0	6	5	11
Adamson	Bowie	2	2	4	0	0	0	2	2	4
Adamson	Hogg	3	1	4	0	0	0	3	1	4
Adamson	Peeler	3	3	6	0	0	0	3	3	6
Adamson	Reagan	1	1	2	0	0	0	1	1	2
Adamson	<i>Total</i>	15	12	27	0	0	0	15	12	27
Carter	Alexander	2	3	5	2	0	2	4	3	7
Carter	McNair	1	1	2	0	0	0	1	1	2
Carter	Terry	1	1	2	1	0	1	2	1	3
Carter	Turner	1	0	1	0	1	1	1	1	2
Carter	Twain	1	2	3	3	0	3	4	2	6
Carter	Weiss	2	2	4	0	0	0	2	2	4
Carter	<i>Total</i>	8	9	17	6	1	7	14	10	24
Conrad	Highland Meadows	5	0	5	0	0	0	5	0	5
Conrad	Hotchkiss	10	4	14	0	0	0	10	4	14
Conrad	Lowe	10	9	19	0	0	0	10	9	19
Conrad	McShan	3	2	5	0	0	0	3	2	5
Conrad	Stone, J	1	2	3	0	0	0	1	2	3
Conrad	<i>Total</i>	29	17	46	0	0	0	29	17	46
Hillcrest	Frank	6	4	10	0	0	0	6	4	10
Hillcrest	Kramer	3	3	6	0	0	0	3	3	6
Hillcrest	Pershing	4	2	6	0	0	0	4	2	6
Hillcrest	Preston Hollow	3	2	5	0	0	0	3	2	5
Hillcrest	Rogers	0	0	0	0	0	0	0	0	0
Hillcrest	<i>Total</i>	16	11	27	0	0	0	16	11	27
Jefferson	Burnet	8	8	16	0	0	0	8	8	16
Jefferson	Cigarroa	4	6	10	2	0	2	6	6	12
Jefferson	Field	4	3	7	0	0	0	4	3	7
Jefferson	Foster	4	4	8	0	0	0	4	4	8
Jefferson	Knight	5	4	9	0	0	0	5	4	9
Jefferson	Polk	2	1	3	0	0	0	2	1	3
Jefferson	Saldivar	0	0	0	0	0	0	0	0	0
Jefferson	Walnut Hill	2	3	5	0	0	0	2	3	5
Jefferson	Williams	1	0	1	0	0	0	1	0	1
Jefferson	<i>Total</i>	30	29	59	2	0	2	32	29	61
Kimball	Brashear	0	1	1	0	0	0	0	1	1
Kimball	Carpenter	4	2	6	0	0	0	4	2	6
Kimball	Donald	0	1	1	0	0	0	0	1	1
Kimball	Hall	1	1	2	0	0	0	1	1	2
Kimball	Henderson	0	1	1	0	0	0	0	1	1
Kimball	Moreno	1	0	1	0	0	0	1	0	1
Kimball	Stemmons	2	0	2	0	0	0	2	0	2
Kimball	Tolbert	3	2	5	0	0	0	3	2	5
Kimball	Webster	0	0	0	0	0	0	0	0	0
Kimball	<i>Total</i>	11	8	19	0	0	0	11	8	19

table continues

Table (Continued)

High School Feeder	Campus	RM Used			RM Not Used			All		
		Second Grade	Third Grade	Total	Second Grade	Third Grade	Total	Second Grade	Third Grade	Total
Lincoln	Rhoads	3	2	5	1	0	1	4	2	6
Lincoln	Rice	2	1	3	0	0	0	2	1	3
<i>Lincoln</i>	<i>Total</i>	5	3	8	1	0	1	6	3	9
Madison	Dunbar	2	3	5	0	0	0	2	3	5
Madison	King	1	0	1	0	0	0	1	0	1
Madison	Roberts	0	1	1	2	1	3	2	2	4
<i>Madison</i>	<i>Total</i>	3	4	7	2	1	3	5	5	10
Molina	Bethune	6	5	11	0	0	0	6	5	11
Molina	Cochran	3	3	6	0	0	0	3	3	6
Molina	Cowart	3	1	4	0	0	0	3	1	4
Molina	Salazar	3	2	5	0	0	0	3	2	5
Molina	Soto	6	4	10	0	0	0	6	4	10
<i>Molina</i>	<i>Total</i>	21	15	36	0	0	0	21	15	36
North Dallas	Chavez	4	1	5	0	0	0	4	1	5
North Dallas	Hernandez	3	2	5	0	0	0	3	2	5
North Dallas	Houston	2	2	4	0	0	0	2	2	4
North Dallas	Kennedy	3	2	5	0	0	0	3	2	5
North Dallas	Maple Lawn	3	2	5	0	0	0	3	2	5
North Dallas	Medrano, E	3	1	4	0	0	0	3	1	4
North Dallas	Milam	2	2	4	0	0	0	2	2	4
North Dallas	Ray	3	1	4	0	0	0	3	1	4
North Dallas	Zaragoza	2	2	4	0	0	0	2	2	4
<i>North Dallas</i>	<i>Total</i>	25	15	40	0	0	0	25	15	40
Pinkston	Allen	2	2	4	0	0	0	2	2	4
Pinkston	Arcadia Park	5	4	9	0	0	0	5	4	9
Pinkston	Carr	3	2	5	0	0	0	3	2	5
Pinkston	Carver	4	1	5	0	0	0	4	1	5
Pinkston	de Zavala	2	1	3	0	0	0	2	1	3
Pinkston	Earhart	1	2	3	0	0	0	1	2	3
Pinkston	Lanier	4	3	7	0	0	0	4	3	7
Pinkston	Martinez	5	2	7	0	1	1	5	3	8
Pinkston	Stevens Park	4	4	8	0	0	0	4	4	8
<i>Pinkston</i>	<i>Total</i>	30	21	51	0	1	1	30	22	52
Roosevelt	Bryan	3	2	5	1	0	1	4	2	6
Roosevelt	Budd	2	2	4	1	0	1	3	2	5
Roosevelt	Johnston	4	2	6	0	0	0	4	2	6
Roosevelt	Miller	3	4	7	0	0	0	3	4	7
Roosevelt	Starks	1	1	2	0	0	0	1	1	2
<i>Roosevelt</i>	<i>Total</i>	13	11	24	2	0	2	15	11	26
Samuell	Adams, J	0	0	0	0	0	0	0	0	0
Samuell	Hawthorne	3	2	5	0	0	0	3	2	5
Samuell	Ireland	1	3	4	0	0	0	1	3	4
Samuell	Pleasant Grove	4	2	6	0	0	0	4	2	6
Samuell	Richardson	5	1	6	1	0	1	6	1	7
Samuell	Runyon	4	2	6	1	0	1	5	2	7
Samuell	San Jacinto	0	1	1	0	0	0	0	1	1
Samuell	Titche	7	8	15	0	0	0	7	8	15
<i>Samuell</i>	<i>Total</i>	24	19	43	2	0	2	26	19	45
Seagoville	Central	4	2	6	0	0	0	4	2	6
Seagoville	Halliday	5	1	6	0	0	0	5	1	6
Seagoville	Kleberg	2	2	4	0	0	0	2	2	4
Seagoville	Seagoville ES	7	3	10	0	0	0	7	3	10
Seagoville	Seagoville North	5	5	10	0	0	0	5	5	10
<i>Seagoville</i>	<i>Total</i>	23	13	36	0	0	0	23	13	36
Skyline	Callejo	0	2	2	0	0	0	0	2	2
Skyline	Conner	0	0	0	0	0	0	0	0	0
Skyline	Guzick	1	1	2	0	0	0	1	1	2
Skyline	Rowe	1	1	2	0	0	0	1	1	2
Skyline	Silberstein	2	0	2	0	1	1	2	1	3
Skyline	Tatum	1	2	3	1	1	2	2	3	5
Skyline	Truett	0	0	0	3	0	3	3	0	3
Skyline	Urban Park	0	0	0	0	1	1	0	1	1
<i>Skyline</i>	<i>Total</i>	5	6	11	4	3	7	9	9	18

table continues

Table (Continued)

High School Feeder	Campus	RM Used			RM Not Used			All		
		Second Grade	Third Grade	Total	Second Grade	Third Grade	Total	Second Grade	Third Grade	Total
South Oak Cliff	Bushman	0	0	0	0	0	0	0	0	0
South Oak Cliff	Holland	2	1	3	0	0	0	2	1	3
South Oak Cliff	Jordan	1	0	1	0	0	0	1	0	1
South Oak Cliff	Marsalis	2	2	4	0	0	0	2	2	4
South Oak Cliff	Oliver	3	2	5	0	0	0	3	2	5
South Oak Cliff	Russell	0	0	0	0	0	0	0	0	0
South Oak Cliff	Thornton	2	2	4	0	0	0	2	2	4
South Oak Cliff	Young	0	0	0	0	0	0	0	0	0
<i>South Oak Cliff</i>	<i>Total</i>	<i>10</i>	<i>7</i>	<i>17</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>10</i>	<i>7</i>	<i>17</i>
Spruce	Anderson, W	7	5	12	0	0	0	7	5	12
Spruce	Blair	5	4	9	0	0	0	5	4	9
Spruce	Burleson	5	3	8	0	0	0	5	3	8
Spruce	Cuellar	2	4	6	0	0	0	2	4	6
Spruce	Dorsey	3	3	6	0	0	0	3	3	6
Spruce	Douglass	1	2	3	0	0	0	1	2	3
Spruce	Gonzalez	2	3	5	0	0	0	2	3	5
Spruce	Lagow	2	2	4	0	0	0	2	2	4
Spruce	Macon	2	2	4	0	0	0	2	2	4
Spruce	Moseley	7	4	11	0	0	0	7	4	11
<i>Spruce</i>	<i>Total</i>	<i>36</i>	<i>32</i>	<i>68</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>36</i>	<i>32</i>	<i>68</i>
Sunset	Hoe	4	5	9	0	0	0	4	5	9
Sunset	Jones	2	3	5	0	0	0	2	3	5
Sunset	Kahn	5	5	10	0	0	0	5	5	10
Sunset	Peabody	5	5	10	0	1	1	5	6	11
Sunset	Rosemont ES	N/A	7	7	N/A	2	2	N/A	9	9
Sunset	Rosemont Primary	3	N/A	3	4	N/A	4	7	N/A	7
Sunset	Winnetka	7	6	13	0	0	0	7	6	13
<i>Sunset</i>	<i>Total</i>	<i>26</i>	<i>31</i>	<i>57</i>	<i>4</i>	<i>3</i>	<i>7</i>	<i>30</i>	<i>34</i>	<i>64</i>
White	Adams, N	1	1	2	0	0	0	1	1	2
White	Bush	2	1	3	0	0	0	2	1	3
White	Cabell	2	2	4	0	0	0	2	2	4
White	Caillet	2	0	2	0	0	0	2	0	2
White	Degolyer	0	2	2	0	0	0	0	2	2
White	Gooch	2	1	3	0	0	0	2	1	3
White	Junkins	3	3	6	0	0	0	3	3	6
White	Marcus	3	2	5	0	1	1	3	3	6
White	Withers	2	1	3	0	0	0	2	1	3
<i>White</i>	<i>Total</i>	<i>17</i>	<i>13</i>	<i>30</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>17</i>	<i>14</i>	<i>31</i>
Wilmer-Hutchins	Ervin	2	3	5	2	0	2	4	3	7
Wilmer-Hutchins	Wilmer-Hutchins ES	4	3	7	1	0	1	5	3	8
<i>Wilmer-Hutchins</i>	<i>Total</i>	<i>6</i>	<i>6</i>	<i>12</i>	<i>3</i>	<i>0</i>	<i>3</i>	<i>9</i>	<i>6</i>	<i>15</i>
Wilson	Jackson	1	0	1	0	0	0	1	0	1
Wilson	Lakewood	0	4	4	0	0	0	0	4	4
Wilson	Lee, R	1	0	1	0	0	0	1	0	1
Wilson	Lipscomb	3	1	4	0	0	0	3	1	4
Wilson	Mount Auburn	4	2	6	0	0	0	4	2	6
<i>Wilson</i>	<i>Total</i>	<i>9</i>	<i>7</i>	<i>16</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>9</i>	<i>7</i>	<i>16</i>
All		398	320	718	33	10	43	431	330	761

Note. N/A=Not applicable. RM Used=RM was implemented during the walkthrough as scheduled. RM Not Used=RM was not being implemented during the walkthrough (although expected based on the school schedule).

Appendix I

Appendix I: Spring 2016 RM Campus Administrator Survey Results

Please mark your level of agreement with the following.	Strongly Agree n (%)	Agree n (%)	Neither Agree Nor Disagree n (%)	Disagree n (%)	Strongly Disagree n (%)
I would like to have Reasoning Mind (RM) at my campus next year.	56 (24)	80 (35)	50 (22)	26 (11)	18 (8)
RM helps teachers on my campus to be more effective in the classroom.	27 (12)	87 (38)	66 (29)	34 (15)	14 (6)
Students at my school benefit from RM.	40 (17)	114 (50)	50 (22)	18 (8)	7 (3)
I would recommend RM to other administrators.	39 (17)	83 (37)	63 (28)	29 (13)	11 (5)
Teachers on my campus are positive toward RM.	26 (12)	92 (40)	63 (28)	37 (16)	10 (4)
I (or another campus administrator) schedule monthly team meetings with all RM teachers to discuss school-specific implementation issues.	32 (14)	87 (39)	47 (21)	55 (24)	5 (2)
I (or another campus administrator) discuss implementation data found in the RM dashboard with RM teachers.	45 (20)	146 (64)	17 (7)	21 (9)	0 (0)
I (or another campus administrator) conduct walk-throughs to support and provide feedback to RM teachers about implementation quality.	38 (17)	146 (64)	27 (12)	17 (7)	1 (0)
How helpful were the following RM resources?¹	Very Helpful n (%)	Somewhat Helpful n (%)	Not Helpful n (%)		
RM website	85 (44)	100 (52)	8 (4)		
RM dashboard	108 (52)	92 (45)	6 (3)		
How helpful were the following district resources?²	Very Helpful n (%)	Somewhat Helpful n (%)	Not Helpful n (%)		
RM Standards and Best Practices for Dallas ISD	72 (36)	110 (56)	16 (8)		
RM Principal Checklist	75 (45)	84 (50)	8 (5)		
RM Campus Technology Checklist	64 (39)	89 (54)	11 (7)		
How satisfied are you with the following related to RM implementation at your campus this year?³	Extremely Satisfied n (%)	Satisfied n (%)	Neither Satisfied Nor Dissatisfied n (%)	Dissatisfied n (%)	Extremely Dissatisfied n (%)
Support from RM Implementation Coordinator	98 (44)	90 (41)	26 (12)	5 (2)	1 (1)
Support from RM technology staff	57 (31)	84 (45)	40 (21)	3 (2)	2 (1)
Support from other RM staff	53 (29)	90 (48)	40 (21)	2 (1)	1 (1)
Support from campus administrators	74 (37)	91 (46)	30 (15)	2 (1)	1 (1)
Support from math campus instructional coach	88 (46)	79 (42)	19 (10)	2 (1)	2 (1)
Support from campus-based technician	49 (25)	90 (47)	36 (19)	9 (5)	7 (4)
Support from district Information Technology central staff	32 (18)	81 (46)	51 (29)	8 (5)	4 (2)
Support from STEM central administrators	26 (16)	64 (40)	62 (39)	4 (3)	3 (2)
How often have the following issues kept teachers on your campus from implementing RM with students as planned?	Very Frequently n (%)	Frequently n (%)	Occasionally n (%)	Rarely n (%)	Never n (%)
Problems with laptop(s) from COW cart	31 (14)	47 (21)	84 (38)	52 (23)	8 (4)
Problems with computer(s) in wired computer lab	7 (3)	29 (14)	76 (35)	69 (32)	34 (16)
Computer lab unavailable/delayed due to repairs/reimaging	10 (5)	22 (10)	33 (15)	93 (43)	57 (27)
Computer lab unavailable due to use by other students during RM scheduled time (e.g., testing)	10 (5)	18 (8)	37 (17)	87 (41)	61 (29)
School schedule conflicts (e.g., field trips, assemblies, testing, etc.)	5 (2)	15 (7)	62 (29)	97 (44)	40 (18)
Student log-in issues	10 (5)	21 (10)	78 (37)	95 (44)	9 (4)
Computers not charged/not holding their charge	19 (9)	29 (13)	71 (33)	82 (38)	15 (7)
Wireless connectivity issues	23 (11)	40 (19)	77 (36)	62 (29)	12 (5)
Network issues	16 (7)	35 (17)	80 (38)	71 (34)	9 (4)
Limited access to computers/scheduling issues (not enough working computers, difficulty scheduling laptop carts, etc.)	22 (10)	25 (11)	47 (22)	84 (39)	38 (18)

Note. Total number of campus administrator respondents=231. ¹ Administrators that marked "did not use/attend" were not included. ² Administrators that marked "did not use" were not included. ³ Administrators that marked "not applicable" were not included. Some percentages may not add to 100 due to rounding.

Appendix J

Appendix J: Spring 2016 RM Teacher Survey Results

Please mark your level of agreement with the following.	Strongly Agree n (%)	Agree n (%)	Neither Agree Nor Disagree n (%)	Disagree n (%)	Strongly Disagree n (%)
I would like to continue teaching with Reasoning Mind (RM) next year.	196 (37)	200 (38)	73 (14)	30 (6)	24 (5)
RM helps me to be more effective in the classroom.	130 (25)	205 (39)	111 (21)	60 (12)	17 (3)
Students in my classroom benefit from RM.	181 (35)	243 (47)	69 (13)	17 (3)	12 (2)
I would recommend RM to other teachers.	165 (32)	217 (42)	90 (17)	34 (6)	16 (3)
Teachers on my campus are positive toward RM.	118 (23)	191 (37)	143 (28)	49 (9)	16 (3)
My principal (or another campus administrator) schedules monthly team meetings with all RM teachers to discuss school-specific implementation issues.	71 (14)	159 (31)	129 (25)	103 (20)	52 (10)
My principal (or another campus administrator) discusses implementation data found in RM dashboard with RM teachers.	88 (17)	193 (37)	110 (21)	86 (17)	40 (8)
The principal (or another campus administrator) conducts walk-throughs to support and provide feedback to RM teachers about implementation quality.	80 (15)	227 (44)	101 (19)	70 (14)	41 (8)
How helpful were the following RM resources?¹		Very Helpful n (%)	Somewhat Helpful n (%)	Not Helpful n (%)	
RM Qualification Course (in person)		174 (58)	117 (39)	8 (3)	
RM Qualification Course (online)		124 (37)	191 (57)	20 (6)	
Other RM training (in person)		176 (54)	137 (42)	13 (4)	
How helpful were the following RM resources?²		Very Helpful n (%)	Somewhat Helpful n (%)	Not Helpful n (%)	
Other RM Training (online)		93 (39)	135 (56)	12 (5)	
RM website		283 (58)	202 (41)	6 (1)	
RM dashboard		307 (62)	179 (36)	7 (2)	
RM system reports		332 (67)	153 (31)	8 (2)	
How satisfied are you with the following as you implement RM this year?³	Extremely Satisfied n (%)	Satisfied n (%)	Neither Satisfied Nor Dissatisfied n (%)	Dissatisfied n (%)	Extremely Dissatisfied n (%)
Support from RM Implementation Coordinator	171 (34)	243 (49)	67 (14)	12 (2)	3 (1)
Support from RM technology staff	133 (30)	214 (49)	76 (17)	10 (2)	6 (2)
Support from other RM staff	121 (29)	203 (49)	78 (19)	8 (2)	3 (1)
Support from principal or another campus administrator	121 (25)	215 (45)	113 (24)	22 (5)	6 (1)
Support from math campus instructional coach	161 (35)	187 (41)	86 (19)	16 (3)	10 (2)
Support from campus-based technician	88 (22)	160 (41)	110 (28)	22 (6)	13 (3)
Support from district Information Technology central staff	65 (18)	138 (37)	132 (35)	23 (6)	15 (4)
Support from STEM central administrators	49 (15)	119 (36)	136 (42)	16 (5)	6 (2)
To what extent did students change in the following areas as a result of using RM?⁴	Significantly Improved n (%)	Improved n (%)	No Change n (%)	Regressed n (%)	Significantly Regressed n (%)
Reasoning skills	67 (14)	306 (65)	92 (20)	2 (1)	1 (0)
Non-standard thinking abilities	59 (13)	285 (62)	110 (24)	4 (1)	2 (0)
Independence in learning	93 (19)	310 (64)	76 (15)	4 (1)	3 (1)
Confidence in mathematical ability	82 (17)	305 (63)	97 (20)	2 (0)	2 (0)
Enjoyment of mathematics	134 (27)	283 (58)	66 (14)	5 (1)	2 (0)
How often have the following issues kept you from implementing RM with students as planned?	Very Frequently n (%)	Frequently n (%)	Occasionally n (%)	Rarely n (%)	Never n (%)
Problems with laptop(s) from COW cart	84 (18)	96 (21)	119 (26)	91 (20)	68 (15)
Problems with computer(s) in wired computer lab	32 (8)	37 (9)	110 (28)	89 (22)	131 (33)
Computer lab unavailable/delayed due to repairs/reimaging	18 (5)	26 (7)	67 (17)	107 (28)	166 (43)
Computer lab unavailable due to use by other students during RM scheduled time (e.g., testing)	28 (7)	33 (8)	69 (18)	100 (26)	160 (41)
School schedule conflicts	21 (5)	41 (9)	139 (32)	122 (28)	112 (26)
Student log-in issues	31 (6)	27 (6)	138 (30)	153 (33)	116 (25)
Computers not charged/not holding their charge	50 (11)	50 (11)	115 (25)	137 (30)	102 (23)
Wireless connectivity issues	62 (13)	61 (13)	150 (32)	143 (30)	58 (12)
Network issues	53 (11)	58 (13)	143 (31)	144 (31)	66 (14)
Limited access to computers/scheduling issues	48 (11)	35 (8)	84 (19)	119 (27)	152 (35)

Note. Total number of teacher respondents=525; ¹Teachers that marked "did not use/attend" were not included. ² Teachers that marked "did not use" were not included. ³ Teachers that marked "not applicable" were not included. ⁴ Teachers that marked "do not know" were not included.

Appendix K

Appendix K: Thematic Results of Open-Ended Campus Staff Survey Items

Comment	Campus Administrator <i>n</i>	Teacher <i>n</i>	Total <i>n</i>
Successes			
Increased mathematics and problem-solving skills	22	78	100
Increased student engagement	11	81	92
Increased independent learning	2	59	61
Helpful resource/new ways to teach/reinforce concepts	11	44	55
Allowed more one-on-one with struggling students	18	21	39
STAAR modules	12	19	31
Increased use of RM	26	0	26
Experienced no successes	13	10	23
Increased accuracy	9	11	20
Helpful data monitoring tool	9	11	20
Improved vocabulary, reading, and note-taking skills	1	16	17
Challenges			
Technology-related issues (limited access to working computers, computer/accessories malfunctions, outdated technology, wireless connectivity problems, network problems, log in issues, etc.)	65	132	197
Difficulty meeting mandated time requirements (RM curriculum not aligned to district curriculum, inadequate access to working technology)	70	110	180
Experienced no challenges	11	45	56
Vocabulary/language too difficult for some students	0	29	29
General scheduling issues/logistics	8	17	25
Teachers need more knowledge/support to effectively implement	9	15	24
Student notebook use	4	18	22
Teachers new to RM/getting new teachers trained to use RM immediately	12	5	17
Suggestions for Improvement			
Increase the number of computers/ensure adequate working computers in wired labs/improve technology support	37	68	105
Align RM to district/state curriculum requirements	29	46	75
Reduce the two-hour a week requirement	21	16	37
Do not make RM mandatory/use another math program/do not use in STAAR grades	17	15	32
Ideas specific to RM (have competitions, intro to journaling, etc.)	9	21	30
Increase the amount and quality of training	15	8	23

Note: Some respondents gave comments that fit into more than one category. This table was limited to comments given by 15 or more respondents.

Appendix L³⁵

Propensity Score Matching Detailed Methods

Experimental designs with randomly assigned treatment and control groups are the “gold standard” for research and program evaluation. Random assignment means that each member of a population has an equal chance of receiving the treatment. When everyone has an equal chance of receiving the treatment, it is assumed there are no systematic differences between the treatment and control groups. Any post-treatment differences between the groups are then assumed to result from the treatment, not from pre-existing differences between the groups. An experimental design with random assignment was not possible in this evaluation. Rather, students were assigned to RM classes based upon a number of factors such as principal choice, technology availability, etc. Propensity score matching (PSM) is one alternative when random assignment is not possible (Stuart, 2010; Thoemmes, 2012).

A propensity score is a measure of the likelihood to receive treatment based on individual characteristics (Stuart, 2010). The characteristics used to determine an individual's propensity for treatment are called “covariates.” PSM resulted in individual propensity scores for RM students and non-RM students. For example, imagine a Hispanic male whose primary language at home is Spanish, does not have a disability, and is a RM student. In PSM, he will receive a propensity score that indicates the probability that someone with his characteristics will become a RM student. This male will be matched with a member of the control group (non-RM students of the same age from the district) with a similar propensity score. Following this process, each RM student is matched with a control group member who has the most similar propensity score, thus forming a treatment and comparison group of equal sample sizes. This process is known as 1:1 nearest neighbor matching because a single treatment group member is matched with a single control group member (Thoemmes, 2012). The result is not a comparison group that matches the exact demographics of the treatment group. For example, the Hispanic male may not be matched with another Hispanic male; rather, he will be matched with a control group member with the same probability of receiving the treatment. This mimics the effect of random assignment.

To conduct PSM with RM, the treatment group included RM fifth-grade students, and the control group included all other district fifth-grade students that did not participate in RM. The following covariates from the Dallas ISD data files formed the basis for matching:

- Sex
- Economically Disadvantaged Status
- At Risk Status
- Special Education
- Talented and Gifted Program Eligibility
- Prior Year Retention Status
- English Language Learner (ELL) Status
- African American Ethnicity
- Hispanic Ethnicity
- HIPPY Program
- Other Health Impairment
- Child Primary Language Spanish
- Child Primary Language English/Spanish
- Child Primary Language All Other Languages
- Spanish Spoken at Home
- English and Spanish Spoken at Home
- Home Language All Other Languages
- Non-LEP: Student Opt-in Two-Way Dual Language Program
- Non-LEP: Student Opt-in One-Way Dual Language Program
- Served in the Two-Way Dual Language Program

³⁵ This appendix was adapted from Appendix H in McEnturff (2014).

- Homeless
- Learning Disability
- Speech Impairment
- Visual Impairment
- Emotional Disturbance
- Autism
- Auditory Impairment
- Mental Retardation
- Served in the One-Way Dual Language Program
- Parent Denial of the Dual Language, Bilingual, and ESL Programs
- ESL Program
- Unservable in Bilingual Program
- STAAR Reading Scale Score in 2014-15
- STAAR Mathematics Scale Score in 2014-15

It is recommended to select as many covariates as possible. Furthermore, covariates should include more than demographic variables whenever possible, and covariates should not directly affect the outcome (Stuart, 2010). In this analysis, two academic covariates were used in addition to demographic factors: *STAAR* reading scale scores in 2014-15 and *STAAR* mathematics scale scores in 2014-15.

After selecting the covariates, a dichotomous treatment/control variable was created to separate RM students from the control group. Then, the covariates were used in a logistic regression with RM participation as the treatment indicator. The logistic regression resulted in a “propensity score” for each treatment and control participant, which was used as the basis for matching.³⁶

After PSM was performed for fifth-grade students, the balance of covariates was assessed using univariate and multivariate balance measures. The aim of PSM is to improve balance, which refers to the similarity of covariate distributions between the treatment and comparison groups. When covariates exhibited large univariate imbalance, the propensity score model was respecified to remove these covariates. Typically, large univariate imbalance was a result of having covariates with zero variance (e.g., no RM fifth-grade students were homeless). Removing covariates with zero variance resulted in better balance in all models where balance was an issue. The multivariate imbalance measures represent balance for the group of covariates as a whole, both before and after matching (see Appendix L Table). For “relative multivariate imbalance,” there is no set criterion for acceptable balance, so these are evaluated by comparing imbalance values before and after PSM. PSM successfully improved the balance of covariates when the “after” value was less than the “before” value. This was the case in the current analysis, indicating improved balancing of the covariate distributions. A successful “overall balance test” occurs when $p > .05$, indicating no significant imbalance among the covariates. The PSM sample in the current analysis met this criterion.

Appendix Table: Sample Size and Balance Statistics from Propensity Score Matching

	Original Sample Size		Relative Multivariate Imbalance		Overall Balance Test		
	Treatment	Comparison ^a	Before	After	Chi-squared	df	p
Grade 5	721	9,989	0.856	0.526	12.740	30	0.998

Note. ^aAfter matching, the comparison group (non-RM students) had the same sample size as the treatment group (RM students).

³⁶ In situations where the pool of control group members is smaller than the treatment group, there may not be exact propensity score matches for all treatment group members. In that situation, a caliper width can be imposed to ensure that matches are at least close enough (Thoemmes, 2012). This was not necessary for these data because the potential pool of comparison group members was so large that exact propensity score matches were possible for all treatment members.

Appendix M

Appendix M: Spring 2016 Mathematics Descriptive Statistics by Grade and by Feeder Pattern

High School Feeder	RM Students					All District Students				
	<i>n</i> Tested	Range	Mean	SD	% Passing	<i>n</i> Tested	Range	Mean	SD	% Passing
Second Grade TerraNova										
ACE	293	1-86	44.2	20.1	53.2	296	1-86	44.0	20.3	53.0
Adams	755	1-99	51.0	20.2	63.0	755	1-99	51.0	20.2	63.0
Adamson	302	1-99	43.3	19.7	51.0	303	1-99	43.2	19.8	50.8
Carter	387	1-99	39.8	19.5	41.3	387	1-99	39.8	19.5	41.3
Conrad	526	1-99	43.6	19.5	50.2	530	1-99	43.6	19.4	50.0
Hillcrest	447	1-99	52.4	17.4	69.1	449	1-99	52.3	17.4	68.8
Jefferson	740	1-99	48.4	18.8	61.4	742	1-99	48.3	18.9	61.2
Kimball	706	1-99	48.3	19.3	60.3	706	1-99	48.3	19.3	60.3
Lincoln	181	3-99	56.7	19.7	77.3	182	3-99	56.7	19.6	77.5
Madison	261	1-78	39.1	19.3	39.8	263	1-78	39.0	19.3	39.5
Molina	478	1-99	44.2	18.6	51.5	478	1-99	44.2	18.6	51.5
North Dallas	500	1-99	45.2	18.9	50.8	501	1-99	45.2	18.9	50.7
Pinkston	603	1-99	47.6	20.0	59.5	604	1-99	47.6	20.1	59.4
Roosevelt	311	1-99	44.0	21.0	50.2	315	1-99	43.7	21.2	49.5
Samuell	731	1-99	45.4	19.1	55.0	733	1-99	45.4	19.1	55.0
Seagoville	475	1-99	47.0	20.2	58.1	476	1-99	46.9	20.3	58.0
Skyline	825	1-99	45.2	19.4	53.7	825	1-99	45.2	19.4	53.7
SOC	646	1-99	43.7	19.7	49.5	646	1-99	43.7	19.7	49.5
Spruce	952	1-99	47.8	20.0	58.7	953	1-99	47.7	20.0	58.7
Sunset	663	1-99	51.1	19.9	64.1	663	1-99	51.1	19.9	64.1
White	747	1-99	50.1	19.6	64.0	810	1-99	51.7	19.9	66.4
W-Hutchins	251	1-84	43.8	20.4	53.4	312	1-84	44.1	20.3	54.5
Wilson	488	1-99	61.4	20.3	78.1	566	1-99	59.6	20.7	76.3
District	12,269	1-99	47.4	20.0	57.7	12,498	1-99	47.5	20.1	57.8
Third Grade STAAR										
ACE	317	1162-1918	1437.4	143.3	67.2	317	1162-1918	1437.4	143.3	67.2
Adams	872	772-1918	1447.9	137.0	72.7	875	772-1918	1447.3	137.1	72.5
Adamson	289	1098-1786	1404.4	121.7	62.3	290	1098-1786	1403.9	121.8	62.1
Carter	352	1143-1918	1387.1	131.3	52.3	386	985-1918	1397.4	138.6	55.2
Conrad	426	1122-1707	1390.5	128.8	57.7	427	1122-1707	1390	129.0	57.6
Hillcrest	430	1069-1918	1435.2	132.4	70.0	433	1069-1918	1434.4	132.5	69.7
Jefferson	772	1122-1786	1433.8	125.7	72.0	774	1122-1786	1433.9	125.6	72.1
Kimball	712	1069-1918	1450.4	143.4	71.5	712	1069-1918	1450.4	143.4	71.5
Lincoln	155	1179-1786	1407	130.6	61.3	156	1179-1786	1409.4	133.7	61.5
Madison	245	1122-1786	1357.4	116.3	43.7	246	1122-1786	1357.7	116.2	43.9
Molina	488	1034-1918	1425.2	131.3	67.0	489	1034-1918	1425.2	131.1	67.1
North Dallas	510	772-1918	1412.4	140.0	60.4	511	772-1918	1412.1	140	60.3
Pinkston	608	1098-1918	1413.6	132.9	62.5	609	1098-1918	1413.3	133	62.4
Roosevelt	314	1143-1918	1397.8	124.3	58.0	315	1143-1918	1397.3	124.4	57.8
Samuell	701	1122-1918	1407.1	132.4	61.3	702	1122-1918	1407.2	132.3	61.4
Seagoville	451	1069-1786	1406.3	127.1	60.8	452	1069-1786	1405.9	127.3	60.6
Skyline	907	1098-1918	1410.9	135.9	62.5	908	1098-1918	1410.9	135.9	62.4
SOC	612	1098-1918	1428	143.3	65.5	613	1098-1918	1427.7	143.4	65.4
Spruce	971	1122-1918	1433.4	135.5	69.0	972	772-1918	1432.8	137.1	68.9
Sunset	653	1069-1918	1431.2	130.4	70.0	654	1069-1918	1431.5	130.4	70.0
White	734	1122-1918	1446.3	142.6	71.8	798	1122-1918	1454.1	142.6	73.8
W-Hutchins	218	1122-1918	1373.3	128.1	50.5	270	1122-1918	1398.6	135.8	58.1
Wilson	496	1122-1918	1488	156.3	77.6	569	1122-1918	1478.9	155.6	76.1
District	12,234	772-1918	1424.5	137.1	65.7	12,483	772-1918	1425.4	137.6	66.0

table continues

Table (Continued)

High School Feeder	RM Students					All District Students				
	<i>n</i> Tested	Range	Mean	SD	% Passing	<i>n</i> Tested	Range	Mean	SD	% Passing
Fourth Grade STAAR										
ACE	250	1237-1935	1522.6	150.1	63.6	333	1192-1935	1501.4	148.1	57.1
Adams	318	1080-2068	1546.3	146.7	72.0	741	1080-2068	1545.9	133.1	74.5
Adamson	233	1237-1935	1536.1	137.3	71.2	289	1237-1935	1528.2	132.4	69.6
Carter	285	1237-1935	1478.8	133.6	51.9	415	1237-1935	1481.4	128	52.5
Conrad	327	1216-1935	1513.8	131.3	63.6	445	1163-1935	1497.4	133.9	57.5
Hillcrest	74	1319-1935	1594.2	149.1	78.4	468	1274-2068	1587.1	142.3	78.8
Jefferson	235	868-1855	1531.9	131.4	70.6	758	868-2068	1518.2	137.1	64.8
Kimball	317	1216-2068	1537.8	137.6	71.3	702	1192-2068	1512.6	137.7	63.4
Lincoln	60	1290-1855	1588.3	166.8	71.7	190	1163-2068	1522.3	164.6	60.5
Madison	235	1216-1855	1472.8	115.6	54.0	235	1216-1855	1472.8	115.6	54.0
Molina	106	1237-1935	1495.9	134.5	62.3	426	1237-1935	1525.9	123.9	70.7
North Dallas	266	1256-2068	1499	136.9	60.2	473	1256-2068	1504.8	130.8	63.0
Pinkston	601	1237-2068	1504.1	139.4	59.7	601	1237-2068	1504.1	139.4	59.7
Roosevelt	251	1216-2068	1504.7	147.8	57.8	320	1216-2068	1513.9	159.6	57.5
Samuell	297	1216-1855	1518.5	123.7	66.7	638	1216-2068	1510.2	129.5	62.9
Seagoville	271	1192-1935	1470.1	121.6	49.8	434	1192-2068	1489.1	130.7	55.5
Skyline	391	1192-2068	1507.8	141.7	61.1	784	1192-2068	1511.4	140.0	61.6
SOC	373	1237-1935	1503.7	140.9	61.9	556	1192-1935	1508.4	141.8	63.1
Spruce	298	1237-2068	1541.1	152.9	70.1	958	1216-2068	1527.3	139.9	66.7
Sunset	75	1237-1770	1471.1	124.7	52.0	567	1216-2068	1525.3	135.5	68.1
White	508	1192-1935	1519.8	138.3	63.8	748	1080-2068	1532	139.4	67.8
W-Hutchins	N/A	N/A	N/A	N/A	N/A	313	1216-1935	1466.6	122.6	49.8
Wilson	109	1290-1935	1608.4	142.4	82.6	432	1237-2068	1575.8	148.1	77.1
District	5,881	868-2068	1515.2	140.5	63.3	11,832	868-2068	1518.3	139.4	64.3
Fifth Grade STAAR										
ACE	N/A	N/A	N/A	N/A	N/A	295	1251-2091	1542.6	141.5	58.6
Adams	110	1251-1959	1593	133.8	77.3	787	1251-2091	1605.4	134.1	79.3
Adamson	N/A	N/A	N/A	N/A	N/A	288	1295-2091	1587.5	137.1	72.6
Carter	N/A	N/A	N/A	N/A	N/A	350	1189-1959	1549.4	123.0	64.3
Conrad	N/A	N/A	N/A	N/A	N/A	399	1274-1959	1550.2	128.2	62.7
Hillcrest	50	1359-1881	1612.8	122.3	86.0	443	1313-2091	1639.7	141.9	86.5
Jefferson	28	1385-1771	1583.6	104.7	78.6	741	1274-1959	1564.4	129.4	68.0
Kimball	116	1295-1959	1603.8	119.0	81.9	661	1223-2091	1574.5	129.2	71.6
Lincoln	N/A	N/A	N/A	N/A	N/A	159	1313-1833	1519.0	113.3	55.3
Madison	N/A	N/A	N/A	N/A	N/A	250	1329-1881	1536.9	124.2	57.6
Molina	N/A	N/A	N/A	N/A	N/A	483	931-2091	1567.5	136.6	70.6
North Dallas	N/A	N/A	N/A	N/A	N/A	511	1295-2091	1554.4	134.3	64.0
Pinkston	290	1251-1959	1536.7	135.0	55.2	615	1251-1959	1554.0	128.3	64.2
Roosevelt	38	1521-2091	1726.1	109.8	100.0	305	1274-2091	1559.3	137.8	62.3
Samuell	N/A	N/A	N/A	N/A	N/A	634	1251-2091	1540.8	131.8	59.3
Seagoville	148	1274-1833	1550.5	125.5	67.6	430	1274-2091	1565.8	130.5	69.3
Skyline	N/A	N/A	N/A	N/A	N/A	745	1189-2091	1563.3	132.2	67.1
SOC	N/A	N/A	N/A	N/A	N/A	517	1223-2091	1568.8	125.6	70.8
Spruce	N/A	N/A	N/A	N/A	N/A	886	1274-2091	1589.4	141.2	71.3
Sunset	N/A	N/A	N/A	N/A	N/A	575	1295-2091	1600.2	125.0	80.3
White	N/A	N/A	N/A	N/A	N/A	707	1295-2091	1616.7	134.1	80.1
W-Hutchins	N/A	N/A	N/A	N/A	N/A	313	1251-1833	1509.8	112.5	54.6
Wilson	N/A	N/A	N/A	N/A	N/A	384	1274-2091	1626.9	158.4	78.1
District	780	1251-2091	1573.0	135.1	69.6	11,483	931-2091	1573.9	135.9	69.6

Note. SD=Standard Deviation. SOC=South Oak Cliff. N/A=Not applicable. % passing for *TerraNova*=At or above the 40th percentile. % Passing for *STAAR*=Met 2015-16 Level II Satisfactory. Mean NCE scores were used for *TerraNova*, and mean scale scores were used for *STAAR*. District statistics included Hospital/Homebound students.

Appendix N

Appendix N: Spring 2016 Assessment Scores by RM Hour^a and Accuracy^b Categories

Grade	Total N	Met			Almost Met			Did Not Meet		
		n	Mean	% Passing	n	Mean	% Passing	n	Mean	% Passing
Hour										
2	12,269	4,463	51.7	65%	2,594	47.5	59%	5,212	43.7	51%
3	12,234	3,739	1447.2	72%	2,727	1429.3	68%	5,768	1407.5	61%
4	5,881	1,013	1539.2	70%	820	1526.0	68%	4,048	1506.9	61%
5	780	48	1609.8	81%	134	1574.4	72%	598	1569.8	68%
Accuracy										
2	12,269	4,406	62.8	90%	4,824	45.3	54%	3,039	28.4	16%
3	12,234	9,827	1458.2	78%	1,976	1297.2	19%	431	1238.4	5%
4	5,824	3,535	1578.6	84%	1,537	1441.9	41%	752	1366.5	11%
5	780	326	1673.8	95%	315	1528.5	65%	139	1437.9	21%

Note. “% Passing” was the 40th percentile or higher for *TerraNova* (as of 6/9/16) and 2015-16 Level II Satisfactory for *STAAR* (as of 7/11/16). ^a Met=Logged 100% of expected hours. Almost Met=Logged 80% to 99% of expected hours. Did Not Meet=Logged less than 80% of expected hours. ^b Met=Attained Guided Study Level A accuracy rate of 75% or higher. Almost Met=Accuracy rate between 60% and 74%. Did Not Meet=Accuracy rate of less than 60%. Mean NCE scores were used for second-grade *TerraNova*, and mean scale scores were used for grades 3 to 5 *STAAR*.

Appendix O

Appendix O: Multiple Regression Results for Spring 2016 Mathematics Scores and Various Predictors (RM Students in Grades 2 to 5)

Correlations among Variables										$R^2=0.632$
Second Grade	1	2	3	4	5	6	7	8	9	Adj. $R^2=0.632$
										β t-value
1. Spring <i>TerraNova</i> 2016 Scores	1.00									0.47 62.18***
2. GS Level A Accuracy	0.73	1.00								0.17 26.11***
3. N of Objectives Completed	0.48	0.39	1.00							0.31 40.63***
4. Prior Year <i>Iowa</i> Scores	0.67	0.62	0.39	1.00						-0.01 -1.96*
5. Economically Disadvantaged	-0.16	-0.16	-0.08	-0.14	1.00					0.05 8.60***
6. Gender	0.02	-0.09	0.11	-0.04	-0.01	1.00				-0.03 -2.08*
7. Race (African American)	-0.10	-0.14	-0.13	-0.09	0.01	0.01	1.00			-0.04 -3.20***
8. Race (Hispanic)	0.00	0.03	0.06	-0.01	0.21	0.00	-0.83	1.00		-0.01 -1.38
9. Race (Other)	0.03	0.05	0.03	0.01	-0.05	-0.01	-0.07	-0.23	1.00	
Mean	48.06	69.30	17.92	52.09	0.93	0.51	0.20	0.73	0.02	
Standard Deviation	19.71	13.09	8.70	20.37	0.26	0.50	0.40	0.44	0.14	
Correlations among Variables										$R^2=0.622$
Third Grade	1	2	3	4	5	6	7	8	9	Adj. $R^2=0.622$
										β t-value
1. Spring <i>STAAR</i> 2016 Scores	1.00									0.40 52.57***
2. GS Level A Accuracy	0.70	1.00								0.12 20.19***
3. N of Objectives Completed	0.33	0.26	1.00							0.41 54.33***
4. Prior Year <i>Iowa</i> Scores	0.70	0.61	0.24	1.00						-0.02 -3.24***
5. Economically Disadvantaged	-0.13	-0.09	-0.05	-0.14	1.00					0.01 2.37*
6. Gender	0.00	-0.10	0.10	0.04	0.00	1.00				-0.08 -5.58***
7. Race (African American)	-0.18	-0.18	-0.08	-0.10	0.01	-0.02	1.00			-0.02 -1.58
8. Race (Hispanic)	0.09	0.11	0.04	0.01	0.19	0.01	-0.85	1.00		0.00 0.21
9. Race (Other)	0.03	0.03	0.02	0.01	-0.05	0.00	-0.07	-0.22	1.00	
Mean	1430.09	83.19	9.87	48.90	0.93	0.51	0.20	0.74	0.02	
Standard Deviation	137.08	9.74	6.81	20.49	0.26	0.50	0.40	0.44	0.13	
Correlations among Variables										$R^2=0.664$
Fourth Grade	1	2	3	4	5	6	7	8	9	Adj. $R^2=0.663$
										β t-value
1. Spring <i>STAAR</i> 2016 Scores	1.00									0.27 22.30***
2. GS Level A Accuracy	0.68	1.00								0.06 6.56***
3. N of Objectives Completed	0.30	0.27	1.00							0.58 47.25***
4. Prior Year <i>STAAR</i> Scores	0.79	0.67	0.28	1.00						-0.01 -1.32
5. Economically Disadvantaged	-0.05	-0.04	0.00	-0.05	1.00					0.01 0.79
6. Gender	0.01	-0.07	0.03	0.03	-0.02	1.00				0.00 -0.08
7. Race (African American)	-0.20	-0.21	-0.17	-0.22	-0.03	-0.01	1.00			0.01 0.20
8. Race (Hispanic)	0.15	0.15	0.10	0.16	0.14	0.00	-0.87	1.00		-0.01 -0.42
9. Race (Other)	0.03	0.03	0.15	0.03	-0.01	0.01	-0.08	-0.25	1.00	
Mean	1525.27	76.77	8.39	1409.42	0.95	0.52	0.21	0.73	0.02	
Standard Deviation	139.41	12.25	6.83	128.19	0.23	0.50	0.41	0.44	0.15	
Correlations among Variables										$R^2=0.741$
Fifth Grade	1	2	3	4	5	6	7	8	9	Adj. $R^2=0.738$
										β t-value
1. Spring <i>STAAR</i> 2016 Scores	1.00									0.25 9.00***
2. GS Level A Accuracy	0.73	1.00								0.07 3.37***
3. N of Objectives Completed	0.42	0.36	1.00							0.61 21.56***
4. Prior Year <i>STAAR</i> Scores	0.84	0.72	0.40	1.00						-0.06 -3.14**
5. Economically Disadvantaged	-0.08	-0.01	0.01	-0.04	1.00					0.03 1.33
6. Gender	0.02	-0.04	0.06	0.00	0.04	1.00				-0.01 -0.22
7. Race (African American)	-0.20	-0.18	-0.19	-0.20	-0.03	0.05	1.00			0.01 0.20
8. Race (Hispanic)	0.12	0.11	0.13	0.14	0.14	-0.04	-0.84	1.00		0.06 2.64**
9. Race (Other)	0.15	0.08	0.08	0.11	0.02	-0.03	-0.04	-0.22	1.00	
Mean	1576.58	71.74	46.99	1509.40	0.95	0.51	0.14	0.82	0.01	
Standard Deviation	135.16	11.95	22.88	135.85	0.21	0.50	0.34	0.39	0.11	

Note. $n=11,238$, 11,006, 4,233, and 723 for grades two, three, four, and five, respectively. GS=Guided Study. Adj. R^2 =Adjusted R^2 . * $p<.05$. ** $p<.01$. *** $p<.001$.

Appendix P

Appendix O: Multiple Regression Results for Fourth- and Fifth Grade Students (RM and Comparison)

	Correlations among Variables				$R^2=0.634$ Adjusted $R^2=0.634$	
	1	2	3	4	β	t-value
Fourth Grade						
1. Spring STAAR 2016 Scale Scores	1.00					
2. Prior Year STAAR Scale Scores	0.80	1.00			0.79	136.31***
3. Economically Disadvantaged	-0.12	-0.13	1.00		-0.02	-3.73***
4. RM vs. Non-RM Students	-0.03	-0.03	0.04	1.00	0.00	0.48
Mean	1520.38	1407.01	0.93	0.50		
Standard Deviation	139.11	131.67	0.26	0.50		
					$R^2=0.676$ Adjusted $R^2=0.675$	
Fifth Grade						
1. Spring STAAR 2016 Scale Scores	1.00					
2. Prior Year STAAR Scale Scores	0.82	1.00			0.82	54.54***
3. Economically Disadvantaged	-0.07	-0.05	1.00		-0.03	-2.29*
4. RM vs. Non-RM Students	-0.01	0.02	-0.03	1.00	-0.03	-1.85
Mean	1577.91	1506.84	0.96	0.50		
Standard Deviation	135.27	134.25	0.20	0.50		

Note. $n=11,008$ for grade four and $n=1,442$ for grade five. * $p<.05$. *** $p<.001$. When prior achievement and economically disadvantaged status were accounted for, differences in STAAR 2016 scale scores between RM and non-RM comparison students were not statistically significant ($p>.05$) in both fourth and fifth grades.