Evaluation of Reading Apprenticeship Across the Disciplines (RAAD)

Effective Secondary Teaching and Learning Through Literacy Leadership

WestEd

The Strategic Literacy Initiative

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IMPAQ INTERNATIONAL LLC

SUBMITTED TO

The Strategic Literacy Initiative, WestEd

ATTENTION

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PROJECT

Reading Apprenticeship: Across the Disciplines

DELIVERABLE

Final Evaluation Report

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Executive Summary

INTRODUCTION

Reading Apprenticeship is a model of academic literacy instruction designed by the Strategic Literacy Initiative (SLI) at WestEd to improve student literacy skills and academic achievement. Based on understandings of the close relationship between curricular reform and professional development (Heller & Greenleaf, 2007), Reading Apprenticeship components include an instructional framework and associated professional development model for secondary and post-secondary teachers across the academic subject areas. Guided by the instructional framework (Schoenbach, Greenleaf, & Murphy, 2012), reading instruction is integrated into subject-area teaching, rather than being an instructional add-on or additional curriculum. Teachers across the subject areas learn how to build student capacities to carry out intellectually engaged reading, make meaning, acquire academic and disciplinary language, read independently, and set personal goals for literacy development.

Since 1995, SLI has developed and refined the Reading Apprenticeship instructional framework and professional development model through iterative research and development processes in collaboration with practitioners around the U.S. serving varied populations (Greenleaf & Schoenbach, 2001; Greenleaf & Katz, 2004). In recent years, Reading Apprenticeship has adopted technological innovations such as online discussion tools, course delivery platforms, and video conferencing to design interactive inquiry activities and virtual professional learning groups to support teacher learning.

In 2015, the U.S. Department of Education awarded SLI a three-year Supporting Effective Educator Development (SEED) grant to disseminate Reading Apprenticeship professional learning through the Reading Apprenticeship Across the Disciplines (RAAD) project, a cross-disciplinary blended model of Reading Apprenticeship. Through RAAD, WestEd served 2,240 teachers from 570 schools in 6 states (California, Illinois, Michigan, New York, Texas, and Wisconsin). As part of the grant, IMPAQ International conducted an independent evaluation of RAAD effectiveness. This report presents findings from the randomized controlled trial conducted in California, New York, Texas, and Wisconsin.

OVERVIEW OF THE INTERVENTION

Reading Apprenticeship is a research-based professional learning model and instructional framework designed to improve student literacy and learning. This study is exploring the impact of a 2-year, less time-intensive, cross-disciplinary, blended-learning Reading Apprenticeship model that supports teachers in implementing Reading Apprenticeship through varied online formats, local partner engagement, and site-based teacher leadership and school team meetings.

Teacher teams from multiple subject areas participated in 5 days (32.5 hours) of face-to-face training, facilitated collaboration and learning time for teachers in small, online professional learning community (PLC) meetings (approximately 7 hours per year) and monthly onsite school team meetings (approximately 8 hours per year).

This project included a deliberate design to support Teacher Leaders and Regional Partners from local education organizations to deepen teacher practice, broaden school uptake, and build local capacity to sustain the work. Teacher Leaders were offered support through online materials, partner-convened daylong meetings, and stipends to convene and facilitate these monthly school team meetings. Regional Partners were identified in each participating state to build on and extend existing relationships with school administrators, connect RAAD professional development with other local reform initiatives,

encourage participation of site administrators in RAAD professional development with their teams and in the quarterly Teacher Leader meetings, and assist SLI with logistics and facilitation of the project.

RESEARCH DESIGN

The impact evaluation of RAAD employed a group-randomized controlled trial (RCT) in which 40 middle schools from 6 blocks, labeled A through F, were randomly assigned to a treatment group (19 schools), which received the RAAD intervention; or a control group (21 schools), which was set to receive delayed professional development. Grade 7 or 8 English Language Arts (ELA), science, and social studies teachers recruited from treatment schools received the RAAD professional development and ongoing support during the 2016–18 study period, while control schools conducted business as usual. We collected 2 years of data from the study schools.

The evaluation team estimated program effects by comparing average instructional practices, student reading attitudes and behaviors, and academic achievement among students in study teachers' classrooms in the treatment schools with those in the control schools. We use an intent-to-treat (ITT) approach to estimate the effects of the intervention as actually delivered and experienced by all participating teachers. In addition, to describe the effect of teachers receiving the "full dose" of professional development, we estimate the impact of treatment on the treated (TOT). Lastly, we examined the heterogeneity of treatment effects along site, subject, student, and teacher subgroups based on demographic characteristics.

Data sources for this report include teacher and student surveys, professional development attendance records, teacher focus group discussions, school district student records, and an assessment of student literacy skills.

KEY FINDINGS ABOUT IMPLEMENTATION

Implementation fidelity and contextual factors that may have facilitated or hindered implementation of RAAD were measured through professional development attendance records, teacher surveys, and focus group discussions. These data indicated that, while there were substantial variations across blocks, the RAAD professional development and in-school support was delivered as intended.

- During both study years, three-quarters of schools and over two-thirds of teachers met the fidelity of implementation (FOI) threshold set by SLI for attending the RAAD professional development.
- Although the overall percentage of schools meeting the FOI threshold is high, Blocks B and F consistently had the lowest number of teachers attending RAAD professional development. In Block B, only about one-third of teachers met the minimum attendance threshold for RAAD FOI in both years.
- Teachers participating in focus groups expressed positive views about RAAD, regarding both implementation of Reading Apprenticeship strategies and approaches in the classroom and their professional development experiences. Teachers reported observing advances in student metacognitive learning, greater confidence in reading, increased classroom engagement, and improved leadership skills, and attributed this to their use of Reading Apprenticeship strategies.
- Overall, teachers gave positive feedback about RAAD professional development and reported feeling supported by each other and WestEd during all trainings. They noted that RAAD professional development increased communication and community among teachers involved in the program.

- Teachers participated at a high rate in the face-to-face training, with most teachers attending about 4 out of 5 days. However, teachers in Blocks B, D, and F attended on average just over 3 days.
- In all sessions, focus groups participants reported that the face-to-face training was valuable, with teachers listing the following benefits: collaboration with peers, learning new strategies, reigniting enthusiasm about Reading Apprenticeship concepts, and getting to see the Reading Apprenticeship strategies modeled by WestEd facilitators.
- On average, teachers attended 4 PLC meetings during the first year and close to 7 PLC meetings by the end of the second year of the study. Although no teachers attended all PLC meetings, teachers who implemented RAAD with high fidelity attended 9 PLC meetings, on average. PLC attendance also varied substantially by block, with teachers in Blocks B and F attending fewer than half of the meetings in year 2.
- At the beginning of the first year, teachers reported technical issues affecting their attendance at PLC meetings. These issues lessened over time as teachers became familiar with the online platform. Nevertheless, teachers attended fewer PLC meetings at the end of the second year compared with the beginning.
- Teachers indicated in the surveys that school team meetings were well attended, with almost all teachers reporting that they attended at least one school team meeting. Overall ratings of team meetings were favorable for all teachers across all blocks. Teachers expressed that team meetings were beneficial, allowing teachers to share strategies for implementation and to exchange ideas.
- In all focus group sessions, teachers shared that the reinforcement they received from other teachers during team meetings helped them feel supported by colleagues, strengthened their understanding and use of Reading Apprenticeship strategies, and helped them learn by sharing their classroom strategies and challenges with other teachers.

Implementation was not without challenges, with many teachers (60%) reporting experiencing competing priorities that hampered implementation. Administrative and leadership support varied greatly by block. Some blocks reported leadership support as a challenge, while others reported that their administration was helpful and supportive of implementing the Reading Apprenticeship strategies in the classroom. Furthermore, teachers reported that lack of time and resources were important challenges to successful Reading Apprenticeship implementation.

Contextual factors may also have challenged implementation in some schools. For example, some Reading Apprenticeship coaches who served both treatment and control schools in one block may have used some Reading Apprenticeship practices in control schools. In another block, other literacy initiatives were implemented simultaneously during the study. Though we do not have evidence to investigate this issue further, this imperfect compliance with the study design likely led to underestimation of the true program effects.

KEY IMPACT FINDINGS ON TEACHER AND STUDENT OUTCOMES

We found positive impact on certain teaching practices during the first year, as measured through both teacher and student survey responses. Although most of these contrasts are not replicated in the second year, several impacts remain in the high-fidelity sample, suggesting that FOI in terms of greater participation in the professional learning does matter when it comes to teaching practices.

We found that, after one year of implementation, teachers in treatment schools reported **using fewer traditional practices**, i.e., practices that may be supplemented or replaced by Reading Apprenticeship practices, such as giving a lecture to present subject-area content to the class or reading aloud in the whole-class setting. After 2 years of implementation, the estimated impact was further strengthened. The effect sizes (ES) range from 0.415 to 0.471.

Furthermore, we found significant impacts on the following practices:

- Modeling of **collaboration** practices in both years (ES=0.302 in Year 1; ES=0.373 among high-fidelity teachers in Year 2).
- Teacher use of **differentiated instruction** (ES=0.320 among high-fidelity teachers in Year 2).
- Student use of **reading strategies** (ES=0.405 among high-fidelity teachers in Year 2; ES=0.111 for Year 1 student survey).

RAAD had also statistically significant positive effects on student use of metacognitive inquiry strategies (ES=0.403 in teacher survey; ES=0.132 in student survey) during the first year. Lastly, students in treatment schools reported more class time spent reading (ES=0.160) in Year 1.

We found no significant impact on student attitudes and dispositions, such as reader or student identity, engagement, or growth mindset. The mediating student outcomes were measured through student surveys. We also found that Reading Apprenticeship professional development, as implemented in RAAD over the course of 2 years, did not have an impact on student literacy assessment scores. The estimated impacts are small and not significant for both online literacy assessment and state ELA standardized tests.

CONCLUSIONS

Findings from this study demonstrate the success of the RAAD project in offering teachers professional learning and support to scale to help them change their instructional practices to foster metacognitive inquiry, increase class time spent reading, and encourage use of collaboration and reading strategies by students. These findings were accompanied by significant reduction in traditional teacher practices and are consistent with positive findings from other studies of Reading Apprenticeship. However, this study also shows that this iteration of the Reading Apprenticeship fell short of improving student literacy and achievement as measured by standardized assessments.

The results from this study point to several areas in need of further investigation. Specifically, several conditions could facilitate or hinder the successful implementation of Reading Apprenticeship: the intensity of professional development, the role of local institutional partners in supporting the initiative, and the dosage of the intervention while bringing the model to scale. Furthermore, SLI and the larger field would benefit from continued research on the balance of professional development intensity and capacity-building efforts with the demands these place on teachers, schools, and districts, to identify the optimal levels that lead to meaningful changes in teaching practices and student learning.

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Acronyms

BELS-S	Becoming Effective Learners Student Survey
CAASPP	California Assessment of Student Performance and Progress
CCSS	Common Core State Standards
CCSR	Consortium on Chicago School Research
DRP	Degrees of Reading Power
ELA	English Language Arts
ELL	English Language Learner
ES	Effect size
FOI	Fidelity of Implementation
FRPL	Free- and Reduced-Price Lunch
ITT	Intent to treat
LLC	Limited Liability Company
OLS	Ordinary Least Squares
PD	Professional Development
PLC	Professional Learning Community
RCT	Randomized Controlled Trial
RA	Reading Apprenticeship
RAAD	Reading Apprenticeship Across the Disciplines
SD	Standard Deviation
STAAR	State of Texas Assessments of Academic Readiness
SLI	Strategic Literacy Initiative
SEED	Supporting Effective Educator Development
TL	Teacher Leader
TOT	Treatment on the treated
WWC	What Works Clearinghouse

1. INTRODUCTION

In 2015, the U.S. Department of Education awarded the Strategic Literacy Initiative (SLI) at WestEd a 3-year Supporting Effective Educator Development (SEED) grant to disseminate Reading Apprenticeship professional learning through the Reading Apprenticeship Across the Disciplines (RAAD) project. RAAD is a cross-disciplinary blended model of Reading Apprenticeship. The goal of the project was to improve teacher effectiveness and student learning through literacy-focused, research-based professional learning experiences over a period of 2 school years. Through RAAD, WestEd served 2,240 teachers from 570 schools in 6 states (California, Illinois, Michigan, New York, Texas, and Wisconsin).

As part of the grant, IMPAQ International conducted an independent evaluation of RAAD effectiveness. The study included a subset of about 200 teachers from 40 middle schools in 4 states (California, New York, Texas, and Wisconsin). We used a mixed-methods approach, including a randomized controlled trial, to investigate the impact of the RAAD intervention on teacher practices, student uses of literacy strategies and academic behaviors and dispositions, and student achievement in grades 7 and 8. In addition, the evaluation team gave timely formative feedback on teacher training in and implementation of Reading Apprenticeship strategies. Other formative data collection and analysis was conducted by SLI research staff to gauge program effectiveness and engage in continuous improvement of program elements newly implemented through this dissemination grant. Findings from the formative data collected by SLI are not included in this report.

2. OVERVIEW OF READING APPRENTICESHIP

Reading Apprenticeship is a model of academic literacy instruction designed by SLI at WestEd to improve student literacy skills and academic achievement. Based on understanding of the close relationship between curricular reform and professional development (Heller & Greenleaf, 2007), Reading Apprenticeship components include an instructional framework and associated professional development (PD) model for secondary and post-secondary teachers across the academic subject areas. Both the instructional framework and the PD model are products of extended collaborative design research processes, informed by sociocultural learning theory and research in language and literacy development (Greenleaf & Schoenbach, 2004).

Since 1995, SLI has developed and refined the RA instructional framework and PD model through iterative research and development processes in collaboration with practitioners around the U.S. serving varied populations (Greenleaf & Schoenbach, 2001; Greenleaf & Katz, 2004). These processes have, over time, resulted in new knowledge and practices through processes of joint inquiry into texts and tasks and instructional supports, collaborative design of routines and lessons, and examination of student work and learning, leading to renewed efforts and refinements (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999; Schoenbach, Greenleaf, & Murphy, 2012).

Guided by the instructional framework (see Schoenbach, Greenleaf, & Murphy, 2012), reading instruction is integrated into subject-area teaching, rather than being an instructional add-on or supplemental curriculum. Teachers across the subject areas learn how to build student capacities to carry out intellectually engaged reading, make meaning, acquire academic and disciplinary language, read independently, and set personal goals for literacy development. Through an "apprenticeship" process and ongoing metacognitive conversations, subject-area teachers explicitly teach students the tacit reasoning processes, strategies, and discourse rules that shape successful readers' and writers' work in their disciplines. In recent years, Reading Apprenticeship has adopted technological innovations such as online discussion tools, course delivery platforms, and video conferencing to design interactive inquiry workshops and virtual professional learning groups that support teacher learning. These innovations are expected to efficiently enable more access and opportunities for community building and learning.

2.1. RAAD Professional Development Model: Multiple Touch Points

Reading Apprenticeship is a research-based professional learning model and instructional framework designed to improve student literacy and learning. While several grants have supported implementation and research on the impact of Reading Apprenticeship in discipline-specific learning models—those in which teachers experience 7 to 10 days of learning in content-alike groups—this study explored the impact of a less time-intensive, cross-disciplinary Reading Apprenticeship model that is widely used. To provide the ongoing learning and support for implementation analogous to more time-intensive face-to-face models, this study also explored a blended learning model offering support for Reading Apprenticeship implementation through varied online formats, local partner engagement, and site-based teacher leadership and school team meetings.

Overview of RAAD Program of Professional Learning

Teacher teams from multiple subject areas participated in 5 days (32.5 hours) of face-to-face training, facilitated collaboration, and learning time for teachers in small, online professional learning community (PLC) meetings (approximately 7 hours per year) and monthly onsite school team meetings (approximately 8 hours per year). Teacher Leaders were offered support through online materials, partner-convened daylong meetings, and stipends to convene and facilitate these monthly school team meetings.

The blended professional development for teachers included:

- Summer 2016: 3 days face-to-face training
- Fall 2016: 1 hour per month online PLC facilitated by WestEd SLI staff (1-hour preparation)
- Winter 2016–17: 2 days face-to-face training
- Spring 2017: 1 hour per month online PLC facilitated by WestEd SLI staff (1-hour preparation)
- Monthly onsite school team meetings facilitated by a Teacher Leader throughout the year
- Three Teacher Leader meetings per year (fall, winter, spring) facilitated by Regional Partners
- 2017–18 implementation support: 1 hour per month online PLC; monthly onsite school team meetings facilitated by Teacher Leaders

This project included a deliberate design to support Teacher Leaders and Regional Partners from local education organizations to deepen teacher practice, broaden school uptake, and build local capacity to sustain the work. Regional Partners were identified in each participating state to build on and extend existing relationships with school administrators, connect RAAD professional development with other local reform initiatives, encourage participation of site administrators in RAAD professional development with their teams and in the quarterly Teacher Leader meetings, and assist SLI with logistics and facilitation of the project.

Regional Partners were charged with the following tasks:

- Recruit schools/teachers to participate in Reading Apprenticeship professional learning
- Coordinate the professional learning (i.e., secured facilities, vendors, venue set-up)
- Communicate with Teacher Leaders and administrators regarding support, scheduling, and logistics
- Convene and facilitate Teacher Leader meetings
- Document and report work using WestEd systems

- Share knowledge and practices across schools and states
- Liaise with IMPAQ and school districts as needed for the evaluation
- Present local context information to WestEd and IMPAQ

As shown in Exhibit 1, the Regional Partners in this study varied by type of organization and district locale.[1] Although all had existing framework that supported reading and literacy, the Regional Partners also varied by the model of support for RAAD that was implemented.

Exhibit 1. Characteristics of Regional Partner Organizations

Block	Type of Regional Partner Organization	District Locale	Model for Support for RAAD	Existing Framework to Support Reading/ Literacy
A	County Office	City: large Suburb: large	TL meetings and support for TLs	Yes
B	District Office	City: large	Coaches, TL meetings and support for TLs	Yes
C	State Education Service Agency	Suburb: large	TL meetings and support for TLs	Yes
D	Regional Education Service Agency	City: small	TL meetings and support for TLs	Yes
E	Regional Education Service Agency	Suburb: mid-size	TL meetings and support for TLs	Yes
F	Regional Education Service Agency	City: large	TL meetings and support for TLs	Yes

To facilitate understanding of the framework and professional learning model, Regional Partners attended Reading Apprenticeship professional learning, in most cases before their local Institutes, and SLI project managers met individually with each Regional Partner monthly. To facilitate knowledge sharing across the partner sites, SLI regularly convened the Regional Partners for meetings (monthly by video conference and annually in person). SLI supplied materials to Regional Partners to support their work, including model letters to administrators and teachers, Teacher Leader meeting agendas, and models of engaging Teacher Leaders and administrators in supporting ongoing work at their sites. In addition to sharing practices and successes as well as problem solving with one another and SLI staff, Regional Partners shared formative information with SLI staff to assist in making adjustments and continually develop theory and practice in Reading Apprenticeship. Regional Partners were given financial support through the grant to cover the labor costs associated with these tasks.

Each RAAD school team was asked to select a Teacher Leader to support school team members by convening monthly school team meetings. A series of six cross-school Teacher Leader meetings (three in Year 1, three in Year 2) offered opportunities to deepen understanding of the Reading Apprenticeship framework, share ideas, and problem solve ways to support more effective team meetings and collaborate with colleagues. In consultation with the SLI central office and other network leaders, each Regional Partner convened local Teacher Leader meetings to support Teacher Leaders as they assumed

[1] Schools in this study were blocked based on district or, in the case of nearby districts with few participating schools, geographic area. In this report, the six blocks are given deidentified labels, namely A, B, C, D, E, and F. More information on blocking is presented in Section 3.

these new roles, thereby growing local capacity. SLI gave Regional Partners sample agendas and other material resources for these meetings. Teacher Leaders received an additional stipend for this work.

Teacher Leaders were charged with the following tasks:

- Convene and facilitated monthly site-based school team meetings
- Implement Reading Apprenticeship routines in their own classrooms to "lead from practice" by sharing their own implementation successes and challenges
- Communicate with administrators regarding school teams' work, needs for support, etc.
- Participate in regional Teacher Leader meetings hosted by Regional Partners (3 times per year).

Finally, Principals/assistant principals in the project were asked to:

- Support site-based school teams by ensuring that they had adequate time for professional learning and collaboration
- Develop an understanding of Reading Apprenticeship by attending some of the professional learning and teacher meetings, and by taking part in team meetings and classroom observations.

RAAD PD Institutes

Mirroring the Reading Apprenticeship instructional framework, Reading Apprenticeship PD has been developed to transform teachers' understanding of their role in student literacy development and to build teacher capacity for re-enacting literacy instruction in the academic disciplines (Greenleaf & Schoenbach, 2004; Schoenbach, Greenleaf, & Murphy, 2017). The PD is inquiry based, subject-area focused, and designed to address teachers' conceptual understandings as well as practical implementation needs. The model reflects the understanding that for practice to become truly responsive to the needs and varied contexts of their work, teachers must become adaptive and generative in their use of specific practices (Ball & Cohen, 1999; Gillis, 2014; Kennedy, 2016).

RAAD PD engaged teachers in 5 days of face-to-face PD in cross-disciplinary teams—a 3-day summer Foundations Institute (between May and August) and a 2-day winter Calibration Institute (between December and February). Each PD Institute immersed teachers in learning through models of practice that its designers intend for them to create in their own classrooms. Teachers participated in carefully designed inquiries to help them unlock their own disciplinary expertise in relation to literacy. Most importantly, they collaboratively investigated student work, case studies of student literacy learning, and videotaped classroom lessons designed to foster new expectations of what their own students could accomplish. In PD sessions, they enacted classroom routines to build student engagement, support student collaboration, and foster authentic discussion and problem-solving around course texts, all with the goal of learning new ways to support student thinking and learning with academic materials. Exhibit 2 offers an at-a-glance overview of the Summer and Winter Institutes.

Exhibit 2. RAAD Professional Development Institutes at a Glance

Foundations Institute		
Day 1: Personal and Social Dimensions	Day 2: Metacognitive Conversation	Day 3: Extending Reading
Institute Opening	Opening Routine	Opening Routine
Personal Reading Histories Literacy Learning Case: What Does a Reading Apprenticeship Classroom Look Like?	Introduction to Think Aloud and Talking to the Text: A Metacognitive Conversation About Reading Reading Process Analysis: Think Aloud	Text Complexity Inquiry into Extensive Reading
Reading Process Analysis: Capturing the Reading Process with Reading Strategy Lists The Social and Personal Dimensions: Chapter 3	Literacy Learning Case: Supports for Students' Reading, Thinking, and Talking Planning and Practicing a Reciprocal Think-Aloud	Blending Learning: Profiles and PLCs Planning to embed Reading Apprenticeship
Closing Routine	Closing Routine	Closing Routine
Prepare for Day 2: *Reading for Understanding*, Chapter 3 Bring text you will use with your students.	Prepare for Day 3: *Reading for Understanding,* Chapter 4 Bring text you will use with your students.	Prepare for PLCs and School Team Meetings: Log in to Canvas for dates and next steps.

Calibration Institute	
Day 4: Cognitive and Knowledge-Building Dimensions	Day 5: Formative Assessment
Opening Routine	Opening Routine
Introduction to Schema: Text and Task Analysis Literacy Learning Case: Reading the Constitution in History Class	Literacy Learning Case: Re-envisioning the Role of Teacher Inquiry into Questioning
Clarifying Roadblocks Planning for Implementation	Formative Assessment
Closing Routine	Closing Routine
Prepare for Day 5 Read *Reading for Understanding,* Chapter 8. Bring a class set of Talking to the Text student work.	Prepare for PLCs and School Team Meetings Log in to Canvas for dates and next steps.

SOURCE: WestEd.

2.2. Framework and Logic Model

The Reading Apprenticeship framework is summarized in Exhibit 3. "Apprenticeship" refers to the concept that teachers learn to recognize their own subject-area literacy expertise and to apprentice students into the ways of reading, writing, thinking, talking, and reasoning in their fields. In this way, students are explicitly supported to build identities as people who can engage with challenging subject- area texts and tasks, solve reading problems, and persevere. The framework describes the classroom in terms of four dimensions—Social, Personal, Cognitive, and Knowledge-Building—incorporated into instruction through ongoing metacognitive conversations among students and teachers that make thinking visible. The process is supported by increased opportunities for students to practice reading in more skillful ways (Extensive Reading).[2]

Exhibit 3. Reading Apprenticeship Framework

SOURCE: WestEd.

Exhibit 4 presents the core program inputs of the Reading Apprenticeship model, along with the intended intermediate and ultimate outcomes of the program. The RAAD theory of action posits that the project's professional development and support will enable middle-school teachers to integrate discipline-based literacy instruction into ongoing content-area teaching, improving teaching practices and student attitudes and dispositions along all the dimensions described above. Implementation of the program

[2] https://readingapprenticeship.org/our-approach/our-framework/

inputs is also hypothesized to result in changes in teacher attitudes and beliefs, including belief in the capacity of students to tackle complex texts and tasks and confidence in their ability to implement the Reading Apprenticeship approach in their classroom. Teachers should also be able to offer more engaging literacy instruction. These mediating outcomes are, in turn, hypothesized to increase the quality of students' literacy learning opportunities, leading to improved academic achievement, especially for high-needs students.

2.3. Research Questions

The external evaluation sought to address the following research questions:

Impact Evaluation

Primary questions

1. What is the impact of RAAD on student achievement in literacy in grades 7 and 8?
2. What is the impact of RAAD on students' positive academic behaviors and dispositions toward learning in grades 7 and 8?
3. What is the impact of RAAD on middle-school ELA, science, and social studies teachers' instructional practices and use of Reading Apprenticeship strategies?

Secondary questions

4. What is the impact of RAAD on instructional practice among teacher subgroups (e.g., by subject or experience)?
5. What is the impact of RAAD on grades 7 and 8 student outcomes among key student subgroups?

Implementation Study

6. To what extent were RAAD professional learning activities implemented with fidelity throughout the evaluation sites?
7. What factors facilitate or undermine effective implementation of RAAD?

Exhibit 4. Logic Model

<table>
<tr><th>I. Inputs</th><th colspan="2">II. Mediating Outcomes</th><th>III. Outcomes</th></tr>
<tr>
<td>A. Reading Apprenticeship professional development and support for science teachers and Teacher Leaders including: Face-to-face PD characterized by:
• content focused on disciplinary literacy
• long duration (5 days, 32.5 hours)
• collective participation
• active learning
• coherence
• Inquiry-based PD on metacognitive inquiry and collaboration that facilitates metacognitive inquiry and conversations

B. Recruiting and training of Teacher Leaders on:
• Reading Apprenticeship model & strategies
• providing onsite support
• tools and resources for teachers

C. Implementation support:
• Monthly school-based meetings supported by school or district Teacher Leaders for teacher community building and professional collaboration
• Facilitated online discipline-specific professional learning communities
• School-based support from SLI Regional Partners and SLI leadership
• Resources for teachers and Teacher Leaders (e.g., web portal)
• Regional meetings for Teacher Leaders</td>
<td>A. Teacher Mediating Outcomes:
A1. Teacher Leaders support teacher development and implementation of Reading Apprenticeship
A2. Teachers increase use of Reading Apprenticeship routines, tools and resources:
A2.1. Providing reading opportunities that reflect breadth in genres/text types/levels of text complexity
A2.2. In class learning structures for frequent reading and assigning large volumes of text
A2.3. Supporting students' efforts to comprehend subject-area texts
A2.4. Fostering metacognitive inquiry into reading and thinking processes
A2.5. Providing explicit instruction and modeling of reading comprehension routines, tools, strategies, and processes
A2.6. Fostering and supporting student collaboration
A2.7. Employing instruction that promotes equity
A3. Teachers believe in the efficacy of Reading Apprenticeship and are confident in their ability to implement Reading Apprenticeship & literacy practices</td>
<td>B. Student Mediating Outcomes:
B1. Increased collaboration in a discipline-specific community of readers, writers, and thinkers and problem-solvers
B2. Increased use of comprehension strategies
B3. Increased metacognitive inquiry
B4. Improved reader identity
B5. Improved student identity
B6. Increased reading of a variety of text types and genres
B7. Increased student engagement
B8. Growth mindset</td>
<td>A. Significant increase in achievement:
A1. Increased literacy skills: improved ability to comprehend complex texts; increased academic vocabulary
A2. Improved content knowledge</td>
</tr>
<tr>
<td colspan="4">IV. Factors that facilitate/hinder implementation:
A. Sense of commitment and purpose related to the initiative
B. School cohesion/community
C. Understanding and knowledge of disciplinary ways of thinking
D. Teacher sense of self-efficacy, confidence
E. Level of risk for teachers in adopting new practices
F. Support for implementation at site (administrative, social, material)
G. Burden on teachers (Reading Apprenticeship can be more work for teachers, being responsive to learners in the moment, responding to new goals, new routines, and a higher level of cognitive complexity)
H. Alignment of district policies with the initiative and curriculum constraints</td>
</tr>
</table>

3. STUDY DESIGN AND SAMPLE

3.1. Group-randomized Design

To estimate the effects of RAAD on teacher practices and student outcomes, we designed a group-randomized controlled trial (RCT). Middle schools that had not previously participated in Reading Apprenticeship professional development were randomly assigned to a program group, which received the RAAD intervention; or a control group, which was set to receive delayed professional development. The RAAD logic model identifies the following three core elements of Reading Apprenticeship that define the treatment expected to lead to impact:

- Face-to-face professional learning for teachers in cross-disciplinary groups
- Online, facilitated discipline-specific PLC meetings
- Teacher Leader–supported site-based school team meetings

During the 2-year study period, control teachers engaged in "business as usual." SLI offered teachers in control schools 5 days of face-to-face professional development after the study period, beginning in summer 2018, as well as the PLCs, Teacher Leader development, and support for school team meetings.

The evaluation team estimated program effects by comparing average instructional practices, student reading attitudes and behaviors, and academic achievement among students in study teachers' classrooms in the treatment schools with those in the control schools. The differences between treatment and control group outcomes represent an unbiased estimate of the effects of this (RAAD) instantiation of the Reading Apprenticeship program.

3.2. Recruitment and Random Assignment

School Recruitment and Selection

With the assistance of IMPAQ and Regional Partners, WestEd recruited 40 middle schools from 8 districts in 4 states to be randomly assigned to either the treatment or control group. Starting in November 2015, the school recruitment team contacted school districts in New York, Texas, Illinois, and Michigan. Illinois was ruled out in December 2015 because the participating district required active parental consent. In February 2016, the school recruitment team organized an informational webinar and invited superintendents, principals, and teachers from New York, Texas, and Michigan to learn more about the Reading Apprenticeship program. During spring 2016, the focus of recruitment shifted to California, New York, Texas, and Wisconsin. Michigan was ruled out because the state testing calendar was not in sync with that of other states.

The following selection criteria were used to identify eligible schools:

- Schools must be public middle schools that serve grades 7 and 8 at a minimum;
- Schools must not be engaged in (or planning to implement during the study period) other major reform efforts that may contradict the Reading Apprenticeship intervention or impede the study;

- Schools cannot have specific admission criteria related to academic achievement, e.g., 8th-grade attendance or test-score requirements;[3]
- Schools cannot serve predominately students receiving special education services or provide services to ELL students in self-contained classrooms that would preclude their receiving Reading Apprenticeship; and
- Schools cannot serve a primarily nontraditional population of students, e.g., students who have previously dropped out of high school or who were expelled, or who attend single-sex schools.

Once the applications were received, the recruitment team contacted schools that met the eligibility criteria and conducted follow-up screening via telephone interviews with district officials or school principals to collect additional information as needed. More information was also collected from public sources, such as the Common Core of Data and state department of education websites, to ascertain school eligibility and to learn more about school characteristics such as school size, grade configuration, prior achievement, and student demographics.

After schools were determined eligible, the recruitment team contacted the principals in eligible schools to confirm their commitment to participating in the study. Detailed information about teacher and student consents and random assignment was given to the school principals and staff.

Blocking and Random Assignment

Schools were blocked based on district or, in the case of nearby districts with few participating schools, geographic area. Because of this, schools in one state can belong to one block or be in multiple blocks. Schools were randomly assigned to the treatment or control condition within the six resulting blocks. In this report, the blocks are given deidentified labels, namely A, B, C, D, E, and F. All descriptions and analyses will refer to blocks by these given label names.

Selection of Teachers

To be eligible for participation in the study, teachers were required to teach at least two grade 7 or 8 science, social studies, or ELA classes in the 2016–17 academic year. In addition, each school team needed at least three teachers, where at least one was an 8th-grade ELA teacher. We excluded special education teachers in self-contained classrooms, teachers co-teaching a common group of students in the same classroom, and coaches and facilitators who were not designated to lead instruction in classrooms.[4]

Teachers volunteered to participate in the study. If, after agreeing to participate in the study, a teacher chose to not implement the intervention, we considered them as remaining in the study and continued to collect survey data (if the teacher agreed to continue responding to the surveys) as well as outcomes for the students of that teacher. If a participating teacher left the school during the study, a replacement teacher was considered the teacher of record, and we collected data on that teacher and his/her students.

[3] Exceptions were made for two NYC schools with academic-achievement admission criteria based on the fact that these schools still serve students with characteristics similar to other participating schools in the district (high proportion of minority students and students receiving free- or reduced-price lunch (FRPL), average or below-average student achievement).

[4] Co-teachers were allowed in one block. If the classroom(s) were set up as an integrated co-teaching classroom, then we required the teacher in our study be the lead, general education teacher, not the special education or other support teacher.

Selection of Students

To be included in the study, students were required to be enrolled in a target study class—defined as a regular (e.g., not co-taught or self-contained special education class) 7th- or 8th-grade ELA, social studies, or science course taught by a teacher participating in the study.[5] As noted above, the research team selected up to two target classes per teacher from which to collect student data.

3.3. Teacher Attrition

A total of 185 teachers were recruited and consented before random assignment. If a teacher had been reassigned or left the school during the school year, we made every effort to recruit that teacher's direct replacement. If a teacher was not reassigned or did not leave the school, but decided to no longer participate in the study, a proctor was found to administer the student literacy assessments. The proctor was typically administrative staff or a teacher. In other cases, a substitute teacher was temporarily identified as a participant to complete the teacher survey and administer the student literacy assessments, in circumstances where the teacher was out on extended leave and the substitute was teaching the class for at least 4 of the 6 weeks before the survey administration window.

At the time of random assignment, there were 87 teachers in the 19 treatment schools and 98 teachers in the 21 control schools. Of these:

- In Year 1 (2016–17)
  - 156 remained active;
  - 18 exited during the school year (left the school or were reassigned to ineligible courses) and were replaced by new teachers;
    - Due to various circumstances, the total number of replacement teachers, substitutes, and/or proctors was 19;
  - 12 were determined to be ineligible after receiving final teaching assignment roster information (e.g., were teaching ineligible subject, grade, or type of class);
- In Year 2 (2017–18)
  - Of the 156 original teachers who remained active in Year 1:
    - 132 remained active throughout Year 2;
    - 28 exited during the school year (left the school or were reassigned to ineligible courses); of these:
    - 26 were replaced by new teachers or proctors; 2 were not replaced.
  - Of the 19 Year 1 teacher replacements and proctors;
    - 11 remained active replacement teachers in Year 2;
    - 6 exited during the school year (left the school or were reassigned to ineligible courses); of these:
      - 4 were replaced by new teachers; 2 were not replaced.

Overall, 132 original teachers stayed active throughout both years: 62 teachers in 19 treatment schools, and 70 teachers in 21 control schools. At the end of Year 2, the active teacher sample included 165 teachers, with 77 teachers in 19 treatment schools and 88 teachers in 21 control schools. Exhibit 5 shows

[5] One block was a special case where we allowed co-taught classrooms.

substantial variation in teacher attrition across Blocks A through F. The proportions of teachers who left the study, were replaced, or turned out to be ineligible were the highest in Block B, followed by Block F and then by Block C.

Exhibit 5. Teacher Attrition by Block and Study Year

	Block						
	A	B	C	D	E	F	Total
Year 1 Teachers							
Active Original Teachers	18	29	42	29	24	14	156
Exited	0	5	4	1	2	6	18
New Replacement	0	5	5	1	2	6	19
Ineligible	0	9	2	0	0	1	12
Year 2 Teachers							
Active Original Teachers	16	21	35	27	22	11	132
Exited	1	12	8	2	2	3	28
New Replacement	1	9	8	2	2	4	26
Y1 Replacement—Active	0	3	3	1	2	2	11
Y1 Replacement—Exited	0	3	1	0	0	2	6
Y1 Replacement—Replaced	0	2	1	0	0	1	4

SOURCE: IMPAQ International.

In Year 1, we used fall 2016 rosters to identify eligible courses and select one to two such courses per teacher for data collection. The students enrolled in those courses in the fall became the student study sample for Year 1: 3,527 students in treatment schools and 3,973 students in control schools.

In Year 2, we used fall 2017 rosters to identify eligible courses and select one to two such courses per teacher for data collection. The students enrolled in those courses in the fall became the student study sample for Year 2: 3,514 students in treatment schools and 3,775 students in control schools.

There was zero cluster-level (school-level) attrition in Year 1. In Year 2, one school from Block B did not complete the DRP assessment for any students and is therefore considered a dropout for the literacy assessment. Individual-level (teacher and student) attrition is defined separately for each outcome and is discussed further in Appendix 10.2. Attrition (both overall and differential) for confirmatory student outcomes is low.

3.4. Baseline Study Sample Characteristics

Baseline school characteristics were collected via publicly available school data. Exhibit 6 shows school-level characteristics of the six blocks participating in the study. The blocks ranged from mid-size suburbs to large cities and varied substantively in ethnic composition. Overall, the participating schools included a diverse and high-need population of students.

Exhibit 6. Baseline (2015–16) School Characteristics, by Block

School Characteristic	Block					
	A	B	C	D	E	F
State ELA z-score	0.42	-0.12	-0.37	-0.11	-0.10	-0.55
State Math z-score	0.42	-0.24	-0.28	0.10	-0.24	-0.75
% Asian	18.1%	10.2%	0.2%	8.9%	1.4%	9.1%
% African-American	3.7%	31.0%	0.1%	5.5%	16.6%	26.2%
% Hispanic/Latino	35.8%	51.9%	99.3%	9.5%	29.2%	50.5%
% White	39.1%	5.6%	0.4%	74.1%	47.9%	11.8%
% FRPL	43.4%	79.8%	87.3%	41.2%	54.2%	83.7%
% ELL	3.2%	11.9%	39.1%	5.9%	7.8%	23.0%
% Special Education	7.2%	23.2%	7.7%	16.2%	12.3%	22.0%
% Female	49.6%	47.8%	48.8%	48.1%	48.3%	45.3%
% 8th Graders	50.0%	30.1%	33.8%	45.1%	33.2%	9.7%
Treatment Schools	2	6	4	3	2	2
Total Schools	4	12	8	6	5	5
Locale	City: Large; Suburb: Large	City: Large	Suburb: Large	City: Small	Suburb: Mid-size	City: Large
Treatment Students	629	801	765	511	608	213
Total Students	1,246	1,607	1,669	1,294	1,157	527

NOTE: All means are student-weighted averages of school-level baseline values. Student counts are based on fall 2016 student rosters for target courses of participating teachers. Z-scores are averages of grades 7 and 8 baseline standardized scores for ELA and math, respectively. Scores in each state were standardized based on grade- and subject-specific statewide score distributions.
SOURCE: NCES Common Core of Data, 2015–16; publicly available assessment data; and IMPAQ International calculations.

To evaluate whether the random assignment resulted in statistically equivalent groups at baseline before implementation of RAAD, we compared the school-level and individual-level characteristics of the treatment and control groups.[6] Exhibit 7 shows the results of a balance check of the overall sample of study schools, which indicates that there were no significant differences in observed characteristics between the treatment and control schools after controlling for the block indicator variables. In absolute terms, treatment schools tended to have about 3% fewer African-American or black students (equivalent to effect size of 0.19 of a standard deviation [SD]), but about 5% more Hispanic or Latino students (equivalent to 0.13 SD). For treatment schools, the average standardized state test scores are also generally slightly higher (equivalent to 0.24 SD for ELA and 0.17 SD for math).

[6] To examine the baseline equivalence of our study sample, we regressed student and teacher covariates on (1) the treatment status (indicator variable that takes the value of 1 for schools that were randomly assigned to receive RAAD intervention and 0 for schools that were not) and (2) on blocking variables. We applied the same two-level random-intercept methodology as was used for impact analysis. We also evaluated the equivalence of school-level variables using ordinary least squares. All study sample equivalence checks were performed at the level of the underlying data (i.e., at the school level for all school characteristics, teacher level for all teacher characteristics, and student level for all student characteristics).

Exhibit 7. Baseline Equivalence of Study Schools (2015–16)

School Characteristic	Treatment		Control		Difference	
	Mean	SD	Mean	SD	(ES)	P-value
State ELA z-score	-0.05	0.42	-0.16	0.26	0.244	0.3010
State Math z-score	-0.08	0.42	-0.15	0.33	0.173	0.4238
Ethnicity						
% African-American	11.1%		14.0%		-0.191	0.3793
% Asian	6.7%		8.4%		-0.182	0.4969
% Hispanic/Latino	51.4%		46.6%		0.128	0.2994
% White	28.4%		29.1%		0.028	0.8000
% FRPL	63.2%		66.8%		-0.165	0.3962
% ELL	16.4%		14.9%		0.133	0.3606
% Special Education	13.9%		14.4%		-0.046	0.7302
% Female	48.9%		47.7%		0.487	0.1262
% 8th Graders	34.3%		37.2%		-0.264	0.0610
Total Schools	19		21			
Total Students	3,527		3,973			

NOTE: Student counts are based on fall 2016 student rosters for target courses of participating teachers. Z-scores are averages of grades 7 and 8 baseline standardized scores for ELA and math, respectively. Scores in each state were standardized based on grade- and subject-specific statewide score distributions.
SOURCE: NCES Common Core of Data, 2015–16; publicly available assessment data; IMPAQ International staff calculations.

Teachers supplied demographic data via the teacher surveys. Exhibit 8 shows the characteristics of teachers who participated in the study. The majority of study teachers were female and white. On average, they had over 11 years of teaching experience, around 9 of which were in the target subject for the study. There were no statistically significant differences between treatment and control teachers.

Exhibit 8. Baseline Equivalence of Eligible Teachers

Treatment	Treatment		Control		Difference	
	Mean	SD	Mean	SD	(ES)	P-value
Teaching Experience (Years)	11.14	6.87	12.11	7.24	-0.069	0.5991
Teaching Experience w/in Subject (Years)	9.28	6.45	9.15	5.90	0.054	0.7139
Education						
Bachelor's	45.1%		45.1%			
Master's	54.9%		52.9%			
Educational Specialist or Professional Degree	0.0%		1.0%			
Doctorate	0.0%		1.0%			
Higher than Bachelor's†	55.1%	50.0%	54.0%	50.1%	0.026	0.9204
Reading/Literacy Certificate	10.1%	30.3%	15.0%	35.9%	-0.151	0.2472
Female	71.9%	45.2%	73.0%	44.6%	-0.033	0.8806
Ethnicity						
African-American	7.7%		9.8%			
Asian	2.2%		0.0%			
Hispanic/Latino	31.9%		27.5%			
White	53.8%		56.9%			
Other	0.0%		2.0%			
Multiple	4.4%		2.9%			
Missing	0.0%		1.0%			
Non-white†	42.7%	49.7%	41.0%	49.4%	0.042	0.9053
Total Teachers	89		100			

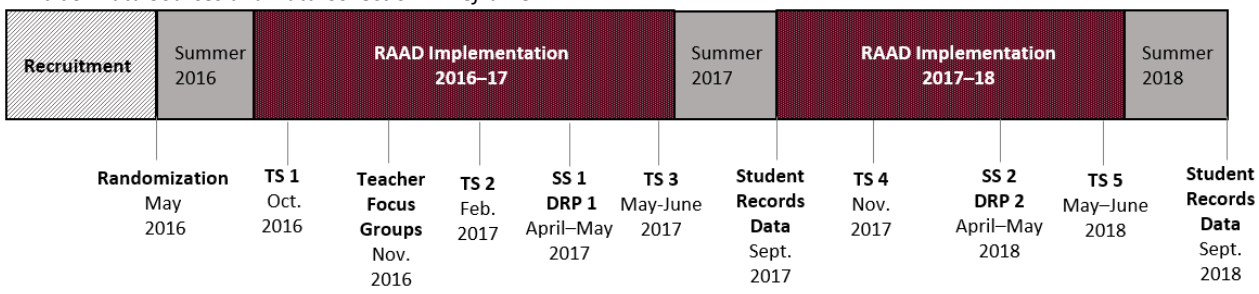
† These regrouping were used to conduct a balance check on the overall teacher sample.
NOTE: The original teachers responded to the demographic questions during the first teacher survey of the study. All replacement teachers were asked for their demographic information during the first teacher survey they filled out.
SOURCE: IMPAQ International staff calculations.

Appendix 10.5 presents further details on the equivalence of the analytic samples. Analytic sample equivalence was examined separately for each outcome, at the level of the underlying impact analysis (i.e., at the student level for all student outcomes and at the teacher level for all teacher outcomes). For this reason, the means, differences, and standardized differences do not always match the overall study sample values. However, the results are generally consistent. We do not observe large standardized differences in teacher or student characteristics at the individual level, though some differences are notable in absolute terms.

4. DATA SOURCES AND MEASURES

This section details the data collected from various sources throughout the study. Teacher attendance was collected at face-to-face trainings and online PLC meetings. We also collected teacher data from focus groups and surveys. Student data collection included surveys, the Degrees of Reading Power (DRP) literacy assessment, and administrative student records data such as demographic characteristics and end-of-year state test scores. Exhibit 9 shows the timeline for the data collection activities over the study period.

Exhibit 9. Data Sources and Data Collection Timeframe



NOTE: TS=Teacher Survey, SS=Student Survey, DRP=Degrees of Reading Power.

4.1. Professional Development Attendance

Teacher participation in professional development sessions was measured through collection of attendance by program staff. Sign-in sheets were collected for the in-person sessions, and attendance at the PLC training activities was recorded electronically. We were unable to collect data on participation in school-based team meetings for a number of reasons, including logistical challenges.[7] Teachers reported their attendance in school team meetings via surveys, and Teacher Leaders uploaded team meeting agendas and attendance to an online Padlet during Teacher Leader meetings. However, these post-meeting records were not considered reliable enough to determine fidelity of implementation (FOI). Therefore, we used attendance of face-to-face professional development activities and online PLC training activities to calculate FOI.

4.2. Teacher Focus Groups

The research team conducted focus group sessions with treatment teachers to gather more data on teacher responses to and experiences with the intervention. The focus group sessions took place early on in the RAAD implementation during the Winter Professional Development Institutes in November and December 2016, and lasted about 45 minutes each. The information collected during the focus groups allowed the researchers to explore early issues related to whether and why the intervention was or was not being implemented faithfully, as well as issues related to the efficacy of online versus face-to-face professional development. A range of additional issues were explored during the focus group discussions, such as experiences with the professional development, perception of how students responded to the intervention, school support for implementation, and challenges faced during implementation (see Appendix 10.9 for focus group protocol).

[7] Another reason was more practical in nature, as there was limited feasibility for Teacher Leaders to collect attendance. However, the predominant concern was that putting Teacher Leaders in the role of evaluators rather than supportive facilitators of ongoing learning could have undermined the support for school team collaboration and community with a focus on compliance.

Exhibit 10. Focus Group Participants by Subject and Block

District	Total	ELA	Science	Social Studies	ELA & Social Studies	Science & Social Studies
Block B	8	5	1	2	0	0
Block C	13	6	4	3	0	0
Block F	5	1	0	1	1	2
Total	26	12	5	6	1	2

SOURCE: IMPAQ International.

Four focus group sessions were held at three Winter Institutes: two sessions in Block C, and one session each in Blocks B and F. IMPAQ researchers completed the two sessions in Block C, one IMPAQ researcher and one subcontracting researcher conducted the Block B session, and WestEd staff conducted the Block F session.[8] All treatment teachers participating in Winter Institutes from the three blocks were invited to join. All teachers who expressed interest in participating in the focus group were included, because the maximum number of participants was not exceeded. Focus group participants each received a $20 gift card. Of the 26 participants, 4 taught 7th grade, 14 taught 8th grade, and 8 taught both 7th and 8th grade. The breakdown of teacher participants is shown in Exhibit 10.

4.3. Surveys

Teacher Surveys

The research team administered a 20-minute online teacher survey five times (in fall, winter, and spring in Year 1, and in fall and spring in Year 2). Collecting five surveys from each teacher allowed us to collect log-like practice data, taking numerous snapshots of classroom practices. Teacher surveys asked participating teachers to report the frequency with which they used teaching practices that were conceptually linked to the Reading Apprenticeship framework (e.g., fostering metacognitive inquiry). Survey items were adapted from a survey administered in a National Science Foundation study of Reading Apprenticeship in high school that successfully distinguished between treatment and control teacher practices, as well as surveys administered in the i3-funded Reading Apprenticeship Improving Secondary Education study and the SEED-funded Reading Apprenticeship: Writing Connections study at the middle-grades level.

The survey was designed to measure hypothesized changes in teacher practices and teaching effectiveness,[9] which included improved results in these areas:

1. Reading opportunities for students that reflect breadth, depth, and variation in subject-specific genres/text types;
2. Support for student collaboration;
3. Fostering student metacognitive inquiry into reading and thinking processes;
4. Explicit instruction and modeling of reading comprehension routines, tools, strategies, and processes;
5. In-class learning structures for frequent reading;
6. Support for student effort to comprehend subject-area texts;
7. Use of instruction that promotes equity; and

[8] As part of its formative evaluation, WestEd collected additional focus group data not included in this report.

[9] See Appendix 10.1 for further details about the survey instruments.

8. Teacher confidence in the ability to implement the Reading Apprenticeship approach in the classroom.

Using responses on the teacher survey, the research team created 8 constructs or scales and subscales. Exhibit 11 outlines the teacher constructs and groupings of relevant scales into domains for analysis.

Exhibit 11. Teacher Survey Domains and Constructs

Domain	Construct
Extensive Reading Reading opportunities for students that reflect breadth, depth, and variation in genres/text types; in-class learning structures for frequent reading	1.1 Reading Opportunities: Texts (Breadth)
	1.2 Reading Opportunities: Learning Structure (Quantity)
Knowledge-Building Dimension Support for student effort to comprehend subject-area texts	2 Content
Social Dimension Support for student collaboration	3.1 Collaborative Activities: Teacher Modeling
	3.2 Collaborative Activities: Student Practice
Metacognitive Inquiry Fostering student metacognitive inquiry into reading and thinking processes	4.1 Metacognitive Inquiry: Teacher Modeling
	4.2 Metacognitive Inquiry: Student Practice
Cognitive Dimension Explicit instruction and modeling of reading comprehension routines, tools, strategies, and processes	5.1 Specific Comprehension Strategies: Teacher Modeling
	5.2 Specific Comprehension Strategies: Student Practice
Engaging All Learners Use of instruction that promotes equity	6 Negotiating Success: Instruction and Assessment (Differentiated Instruction)
Teacher Confidence Teacher confidence in the ability to implement the Reading Apprenticeship approach in the classroom	7 Teacher Confidence
Traditional Practices	8 Traditional Practices

For each construct, we computed the Cronbach's alpha separately for each survey administration. The reliabilities of these constructs range between 0.64 and 0.96, as measured at each survey administration in Year 1 and between 0.71 and 0.95, as measured at each survey administration, in Year 2 (see Exhibit 40 in Appendix 10.1).

Reading Apprenticeship practices are hypothesized to supplement and even replace certain traditional practices. Questions about the use of such practices were also included in the survey and served as a robustness check on the other constructs. Finally, treatment teachers were also asked for their feedback about training and support they received, as well as challenges they faced in implementing the framework (see the Teacher Survey in Appendix 10.9).

Ensuring high response rates was a priority for this aspect of data collection. To encourage a high response rate, IMPAQ used multiple strategies to engage with and remind teachers to complete the survey, including emails introducing the survey and its purpose sent a week before administration, follow-up email reminders once the survey launched, and telephone calls for teachers who did not respond within 1 week of the due date. Up to three telephone calls and 5 email reminders were made to each teacher, with a goal of achieving a 90% response rate at each survey administration.

Overall response rates by study year for the teacher survey were very high: 97.7 percent of participating teachers (n=168) provided responses on at least one of the surveys (Treatment: 97.5%; Control: 97.8%) in Year 1, and 73.8 percent in Year 2 (Treatment: 73.9%; Control: 73.8%). Despite the high overall response rate, some blocks had lower-than-average response rates (Exhibit 12 and Exhibit 13 show a breakdown of response rates by treatment status and block for each study year). The lowest percentages of teachers answering all teacher surveys were in Blocks B and F. The variation between blocks started in Year 1 but became more pronounced in Year 2. In Blocks B and F, only about 50% of teachers answered at least one Year 2 survey, and slightly more than 20% answered all five surveys from both years, while the response rates in the other blocks were substantially higher. These differences in response rates may reflect the high teacher turnover and suggest a lack of FOI in these sites.

Exhibit 12. Teacher Survey Response Rates by Treatment Status and Block in Year 1, Year 1 Sample

	Answered at Least One TS		Answered All TS		Answered One or Two TS		Missed All TS	
	N	%	N	%	N	%	N	%
Overall	168	97.7%	152	88.4%	16	9.3%	4	2.3%
Control	89	97.8%	82	90.1%	7	7.7%	2	2.2%
Treatment	79	97.5%	70	86.4%	9	11.1%	2	2.5%
By Block								
A	18	100.0%	16	88.9%	2	11.1%	0	0.0%
B	33	97.1%	26	76.5%	7	20.6%	1	2.9%
C	45	97.8%	42	91.3%	3	6.5%	1	2.2%
D	30	100.0%	29	96.7%	1	3.3%	0	0.0%
E	26	100.0%	25	96.2%	1	3.8%	0	0.0%
F	16	88.9%	14	77.8%	2	11.1%	2	11.1%

NOTE: Ns reported here are teachers in the Year 1 sample responding to surveys in Year 1.
SOURCE: IMPAQ International staff calculations.

Exhibit 13. Teacher Survey Response Rates by Treatment Status and Block in Any Study Year, Year 2 Sample

	Answered at Least One Y1 TS		Answered at Least One Y2 TS		Answered All TS		Missed All TS	
	N	%	N	%	N	%	N	%
Overall	172	73.8%	166	71.2%	119	51.1%	34	14.6%
Control	90	73.8%	90	73.8%	66	54.1%	19	15.6%
Treatment	82	73.9%	76	68.5%	53	47.7%	15	13.5%
By Block								
A	18	94.7%	17	89.5%	15	78.9%	1	5.3%
B	37	62.7%	30	50.8%	12	20.3%	12	20.3%
C	45	73.8%	48	78.7%	33	54.1%	7	11.5%
D	30	90.9%	29	87.9%	27	81.8%	1	3.0%
E	26	86.7%	26	86.7%	23	76.7%	2	6.7%
F	16	51.6%	16	51.6%	9	29.0%	11	35.5%

NOTE: Ns reported here are teachers in the Year 2 sample responding to surveys in both study years.
SOURCE: IMPAQ International staff calculations.

Student Surveys

A student survey was administered in spring of the first and second years of RAAD implementation. The survey collected information used to construct the mediating student outcomes for which we expected RAAD to have a positive effect (see logic model Exhibit 4). The survey included validated and reliable survey scales from several sources: the Becoming Effective Learners Student Survey (BELS-S) developed by the Consortium on Chicago School Research (CCSR), the Metacognitive Awareness of Reading Strategies Inventory, and the Reading Apprenticeship Opportunity to Learn Survey. The BELS-S measures student-level social-emotional learning outcomes, including the academic mindsets and learning strategies targeted by RAAD, as well as classroom context and schoolwide characteristics (Farrington et al., 2012). The Metacognitive Awareness of Reading Strategies Inventory contextualizes academic mindsets and learning strategies in relation to reading (Mokhtari and Reichard, 2002). It measures student use of global reading strategies (e.g., having a purpose in mind when reading and previewing text), problem-solving strategies (e.g., rereading text, picturing or visualizing information) and support reading strategies (e.g., annotating text). The Reading Apprenticeship Opportunity to Learn Survey measures student perceptions of how literacy was integrated in content-area classes and of their own confidence and academic identity (Greenleaf et al., 2011a, 2011b).

The student mediating outcomes measured by the student survey include:[10]

1. Collaboration in a community of readers and writers;
2. Use of comprehension strategies;
3. Metacognitive inquiry;
4. Reading of a variety of texts;
5. Reader and student identity;
6. Engagement in school and in course work; and
7. Growth mindset.

Exhibit 14 shows the student constructs and domains that are created based on these outcomes for analysis. In addition to constructs of teaching practices in student classrooms, IMPAQ analyzed the impact on student attitudes, beliefs, and dispositions, such as reader or student identity, engagement, and growth mindset. Construct reliabilities (Cronbach's alpha) ranged between 0.71 and 0.93.

Exhibit 14. Student Survey Domains and Constructs

Domain	Construct
Collaboration in a Community of Readers and Writers More frequently contribute to and participate in class discussions; collaborate effectively and respectfully with peers; and draw on each other's knowledge, serving as resources to make sense of text together	1.1 Participation/contribution to class discussion
	1.2 Collaborate effectively/respectfully with peers
	1.3 Belonging
Use of Comprehension Strategies More frequently use comprehension strategies, including those listed under teacher outcomes	2.1 Use of global reading strategies
	2.2 Use of problem-solving strategies
	2.3 Support reading strategies

[10] See Appendix 10.9 for details on survey instruments.

Domain	Construct
	2.4 Integration of content and literacy activity
Metacognitive Inquiry More frequently actively discuss and inquire into: text meaning; their own and others' reading processes; the utility of particular reading strategies; and their preferences, strengths, and weaknesses as a reader	3.1 Metacognitive Inquiry
Reader and Student Identity More positive student perceptions of themselves; more serious about school, think about their future educational goals, have more confidence in their reading and abilities, and have improved academic self-concept; greater awareness of the reading process	4.1 Student identity
	4.2 Reader identity
Reading of a Variety of Texts Increased engagement in reading a variety of texts, including academically challenging course materials; reading more text in class, reading a wider variety of text (including graphs, illustrations, diagrams, primary sources, etc.), and spending more class time engaged in text-based discussions	5.1 Class time spent reading
	5.2 Variety of reading material
	5.3 Pages of reading per day
Engagement in School and in Course Work Improved attendance, increased effort to learn, and completion of assignments; experiencing engaging instructional practices that make learning enjoyable and interesting	6.1 Effort to learn
	6.2 Engaging instruction
Growth mindset Seeing intelligence as something that grows like a muscle (as opposed to a fixed mindset, where intelligence is something you are born with and can't change)	7.1 Growth mindset

The student survey was administered online in all except one block and took no more than a class period to complete. In Year 1, the student survey was collected in five out of six study blocks. The schools in Block B had limited technological capacity to conduct an online survey. In Year 2, the student survey was collected from all six blocks.[11] The questionnaire was administered to all students from target classrooms of participating teachers. Because students could possibly be in multiple target classrooms, some students took the survey more than once. In spring 2017, 5,893 unique students completed an online survey, and 5,570 did so in spring 2018.

Exhibit 15 and Exhibit 16 present response rates by block and by year. We first present the unique student response rate, which counts a response if a survey is submitted in any study classroom a student is enrolled in. An average response rate is then computed across all schools within a given block or by treatment status. Overall, these student survey response rates in Year 1 were high: 80.8% in treatment

[11] After considerable effort to facilitate survey administration, we collected a paper version of the survey in spring 2018 in Block B. The paper survey mirrored the online survey questions, except for four construct measures, where only certain scales were included for those constructs. A listing of these constructs and their reliabilities are presented in Exhibit 40. The exhibit displays reliabilities generated based on scales of all questions asked, and separately, of questions that were included in both the paper and online versions of the survey.

schools and 77.1% in control schools. When looking at rates by block, the average response rates range from 71.0% for Block E to 85.5% for Block D. In Year 2, the average response rate is slightly higher for control schools (78.4%) and slightly lower for treatment schools (75.4%). However, we see much greater variation in rates among blocks in Year 2, with Block F having the lowest rate (64.7%) and Block A having the highest rate of response (82.6%).

Next, we present student survey response rates, which only count a response if a student submitted a survey in a given study classroom. An average response rate is then computed again across all schools within a given block or by treatment status. In Year 1, the student-classroom response rate for the survey overall was 75.5% among students in treatment schools and 74.7% among students in control schools; in Year 2, it was 72.5% in treatment schools and 75.8% in control schools. The rates also varied among blocks. In Year 1, Block E and F had the lowest average student-classroom response rate of 68% to 69%. Block D had the highest student-classroom response rate at 84.2%. In Year 2, Block F had the lowest average rate at 63.5%, while Block A had the highest rate at 81.3%. For a summary of school-level student and student-classroom response rates, see Exhibits 43 and 46 in Appendix 10.2.

Exhibit 15. Student Survey Response Rates by Treatment Status and Block, Year 1

	N Students	Student Response Rate—Average	N Observations	Student-class Response Rate—Average
Overall	5,893	78.8%	7,001	75.1%
Control	3,167	77.1%	3,669	74.7%
Treatment	2,726	80.8%	3,332	75.5%
BLOCK				
A	1,246	83.1%	1,301	81.3%
C	1,669	75.7%	2,123	70.9%
D	1,294	85.5%	1,549	84.2%
E	1,157	71.0%	1,248	68.1%
F	527	79.5%	780	69.4%

NOTE: Block B did not conduct a student survey in Year 1.
SOURCE: IMPAQ International staff calculations from student survey.

Exhibit 16. Student Survey Response Rates by Treatment Status and Block, Year 2

	N Students	Student Response Rate—Average	N Observations	Student-class Response Rate—Average
Overall	7,289	76.9%	8,266	74.2%
Control	3,775	78.4%	4,221	75.8%
Treatment	3,514	75.4%	4,045	72.5%
BLOCK				
A	1,192	82.6%	1,256	81.3%
B	1,719	70.4%	1,749	70.7%
C	1,487	79.4%	1,912	74.1%
D	1,210	81.7%	1,447	78.1%
E	1,118	78.7%	1,277	73.0%
F	563	64.7%	625	63.5%

SOURCE: IMPAQ International staff calculations from student survey.

In summary, we see that there is some variation in response rates across blocks in both study years. Block F tended to have lower student-class response rates, followed by Block B. This is in line with the lower response rates of teachers in those blocks.

Crosswalk between Teacher Survey, Student Survey, and the Logic Model

Exhibit 17 shows the crosswalk between teacher and student surveys, organized according to the outcomes described in the logic model. Both teachers and students reported their own actions and beliefs, as well as those of others, in some cases (i.e., teachers were asked about students and students were asked about teachers, as well as about other students in the classroom). Questions about students' reader identity, student identity, effort, and growth mindset were only asked of the students themselves.

Exhibit 17. Survey Crosswalk of Outcomes

Construct	Construct #	Reported by	Actions by
TEACHING PRACTICES			
Metacognition			
Metacognitive Inquiry	TS 4.1	Teacher	Teacher
Metacognitive Inquiry	TS 4.2	Teacher	Students
Metacognitive Inquiry	SS 3.1	Students	Teacher
Metacognitive Inquiry	SS 3.1	Students	Students
Social Dimension			
Collaborative Activities	TS 3.1	Teacher	Teacher
Collaborative Activities	TS 3.2	Teacher	Students
Collaborative Activities	SS 1.2	Students	Teacher & Students
Belonging	SS 1.3	Students	Teacher & Students
Participation/Contribution to Class Discussions	SS 1.1	Students	Student
Cognitive Dimension			
Specific Comprehension Strategies	TS 5.1	Teacher	Teacher
Specific Comprehension Strategies	TS 5.2	Teacher	Students
Global Reading Strategies	SS 2.1	Students	Student
Problem-solving Strategies	SS 2.2	Students	Student
Support Reading Strategies	SS 2.3	Students	Student
Knowledge-Building Dimension			
Content	TS 2	Teacher	Teacher
Integration of Content and Literacy Activities	SS 2.4	Students	Student
Extensive Reading			
Breadth (Reading Opportunities: Texts)	TS 1.1	Teacher	Teacher
Breadth (Variety of Reading Material)	SS 5.2	Students	Students
Quantity (Reading Opportunities: Learning Structure)	TS 1.2	Teacher	Students
Quantity (Class Time Spent Reading)	SS 5.1	Students	Students
Quantity (Pages of Reading per Day)	SS 5.3	Students	Student
Engaging All Learners			
Differentiated Instruction (Negotiating Success)	TS 6	Teacher	Teacher
Engaging Instruction	SS 6.2	Students	Teacher
TEACHER CONFIDENCE	TS 7	Teacher	Teacher
TRADITIONAL PRACTICES	TS 8	Teacher	Teacher & Students
STUDENT BELIEFS AND BEHAVIORS			
Student Identity	SS 4.1	Students	
Reader Identity	SS 4.2	Students	
Effort to Learn	SS 6.1	Students	
Growth Mindset	SS 7.1	Students	

4.4. Student Literacy

Degrees of Reading Power Assessment

Primary student achievement outcomes were measured using the Degrees of Reading Power (DRP) online assessment in the spring of each year of implementation. The DRP presents both criterion- and norm-referenced measures of how closely and deeply students read and comprehend informational texts at different levels of text complexity. Each DRP test consists of nonfiction passages with embedded sentence-completion word choices to determine how well students understand the surrounding text. The reading task of each DRP test item assesses the development of close reading skills and requires thought and analysis. The DRP is aligned to the Common Core State Standards (CCSS) and has been shown to be reliable and a strong predictor of student achievement on CCSS-aligned tests (Koslin, Zeno, & Koslin, 1987), indicating strong construct validity.

The DRP has several levels of difficulty roughly aligned with grade levels, and at least two versions for each level. The research team worked with teachers and school data collection coordinators to complete a database for each class with individual student IDs that were used by the test developers to set up the assessment for online administration and data collection.[12] The test was untimed, and it typically took less than one class period to administer. The data were collected on the test developer's server and downloaded securely to the IMPAQ server for analysis.

Students took the DRP assessment in both spring 2017 (n=7,500) and spring 2018 (n=7,289). The DRP response rate was 82.6% among students in treatment schools and 81.6% among students in control schools in spring 2017, and 83.0% among students in treatment schools and 78.0% among students in control schools in spring 2018. In spring 2017, the response rates in each block averaged from 75.3% in Block F to 85.7% in Block B. In spring 2018, the response rates in each block averaged from 69.6% in Block D to 86.7% in Block A (see Exhibits 44 and 47 in Appendix 10.2).

4.5. Student Records Data

To determine program effects on achievement, in addition to DRP, IMPAQ International also collected state standardized test scores in ELA, math, and science[13] from the participating school districts for all students of teachers' target classes in treatment and control schools in the 2016–17 and 2017–18 school years. For California, we used scale scores from the California Assessment of Student Performance and Progress (CAASPP) Smarter Balanced English Language Arts and Mathematics assessments. For Texas, we used scale scores from the State of Texas Assessments of Academic Readiness (STAAR) ELA, math, and science assessments (8th grade only). In Wisconsin, we used scale scores from the Wisconsin Forward ELA, math, and science exams (8th grade only). In New York, we collected scale scores from the New York State English Language Arts Test and Math Test. We collected the 2017 state standardized tests scores in English/reading from all schools (n=7,500). Test scores were available for 92.8% of the students in treatment schools and 91.4% of the students in control schools in 2017, and for 95.3% of the students in

[12] Together with an assessment vendor, IMPAQ International facilitated the online administration of the DRP assessments in 5 of the 6 blocks. All schools in Block B administered the DRP as part of their spring standardized testing. We collected the DRP scores from these schools as part of the student records data request to those districts rather than from the vendor. However, in Year 2, one school somehow did not administer the DRP at all in that study year. In that case, we could not obtain any DRP scores for students enrolled in that school.

[13] State standardized social studies tests are typically not administered to 8th graders.

treatment schools and 95.3% of the students in control schools in 2018 (see Exhibits 45 and 48 in Appendix 10.2).

We standardized the test scale scores, because the state test scores came from different sources and were not designed to be directly comparable. In other words, we put the state scale scores onto the same scale. We did this for each state and each grade level separately. The final z-scores allow for cross-state comparisons.

5. ANALYTIC METHODS

5.1. Implementation

Program implementation was analyzed using data from teacher surveys, focus group discussions, and participant attendance records. Attendance data were collected for face-to-face professional development and online PLC training activities by program staff; as noted above, attendance data for participation in school-based team meetings was not collected. Professional development attendance was also gauged by self-reporting in teacher surveys. The attendance data and closed-ended survey responses related to implementation were analyzed descriptively by computing percentages and means.

In addition, qualitative data such as teacher survey open-ended responses and focus group transcripts were analyzed to assess the extent to which RAAD teachers implemented the framework in their classrooms. Teacher survey open-ended responses were reviewed to collect common themes regarding program feedback and implementation and supporting quotations for quantitative data analysis results. After focus group data collection was complete, we reviewed the transcripts to develop a coding structure based on common themes, and we supported the structure with descriptions and examples based on the research questions and IMPAQ researchers'[14] reactions to the focus groups. All transcripts were then coded by one coder who was also a focus group interviewer, and then reviewed by a second coder who was also present at the focus group sessions.

5.2. Impact

The primary analysis focuses on the effects of RAAD on reading performance of 7th and 8th graders in ELA, science, and social studies courses in Year 2, as measured by the DRP and state ELA assessments. To account for the fact that students and teachers were clustered in schools, we estimated the impacts in a mixed-level model (see Appendix 10.6 for details). The model compares average outcomes among the students enrolled in the target classes at the treatment schools with average outcomes among the students enrolled in the target classes at the control schools, after controlling for prior achievement and student and school characteristics. Since random assignment was blocked by site, all impact analyses include block fixed effects.

We use an intent-to-treat (ITT) approach to answer our primary questions regarding the impact of the RAAD Reading Apprenticeship program. Our primary impact estimates, therefore, capture the effects of the intervention as actually delivered and experienced by all participating teachers (including teachers who did not participate fully or dropped out, and their students). By design, the study does not control for potential dose variation (exposure to RAAD teachers) among students. All of the treatment group

[14] WestEd and one subcontracting researcher also conducted focus groups that are included in this analysis. However, only IMPAQ International researchers were involved in the analysis of the focus group data.

students in the study sample are treated equally in the main analysis, regardless of their actual level of exposure to the intervention. Therefore, our primary impact estimates reflect the average dosage experienced by teachers and students in this particular study.

To estimate the effect of student exposure to multiple study teachers, both within or across years, we separately add variables such as number of teachers, number of courses, and an indicator for being enrolled in participating courses in both years, as well as interactions between and among these variables and the treatment indicator.

To describe the potential effect of teachers receiving the "full dose" of professional development, we estimate the impact of treatment on the treated (TOT) using two methodologies: (1) by restricting the analytic sample to the control schools and students in treatment schools who meet the high-fidelity criteria, and (2) by adding the high-fidelity indicator to the equation and estimating it over students/teachers only in treatment schools.

Lastly, we examine how the degree of teacher implementation of Reading Apprenticeship practices influences the impact of RAAD on student outcomes by applying the linear structural equation estimation (LSEE) approach, described in Schochet, Puma, and Deke (2014). As discussed in Appendix 10.6, in the impact analyses, we included all school and individual characteristics strongly correlated with the outcome measures. This ameliorates the influence of any observable characteristic on the program impact estimates. Models with additional control variables (i.e., characteristics not strongly correlated with outcomes), as well as "naïve" models (ones that control only for treatment and blocking), were estimated to give additional robustness checks for our main results. Appendix 10.7 presents the results of the robustness checks.

6. IMPLEMENTATION OF CORE PROGRAM COMPONENTS

6.1. Purpose of Implementation Study

The main purpose of studying the implementation in relation to the RCT is to verify the extent to which the RAAD intervention was implemented during Year 1 (2016–17) and Year 2 (2017–18) as planned by the developers. Understanding how the intervention was implemented gives context to the impact findings and facilitates their interpretation.

Two research questions guide the implementation study:

1. To what extent were RAAD professional learning activities implemented with fidelity throughout the evaluation sites?
9. What factors facilitate or undermine effective implementation of RAAD?

Secondary questions include the following:

- To what extent did teachers participate in face-to-face professional development led by SLI staff?
- To what extent did teachers participate in online professional learning community meetings?
- To what extent did teachers participate in monthly site-based school team meetings led by Teacher Leaders?
- To what extent did treatment teachers report using Reading Apprenticeship routines, tools, strategies, and practices?
- How much variation in implementation fidelity was there across sites?

Using data from the teacher surveys completed by treatment and control teachers, we assessed the extent to which RAAD teachers participated in the professional learning opportunities and implemented the Reading Apprenticeship instructional framework in their classrooms. We also used teacher surveys to gather information about teacher views on what they learned from the three core RAAD components (face-to-face training, school team meetings, and online PLC meetings) and the perceived value of these components. Data collected from teacher focus groups are also presented to support implementation findings. In this section, we present the FOI metrics for the program overall, and then we discuss each core program component in more detail.

6.2. Fidelity of Implementation Metrics

The foundation of the implementation study is a clear and accurate definition of the treatment that specifies the critical components expected to lead to impact. The RAAD logic model theorizes that successful implementation of RAAD relies on teachers attending the following three core elements of this instantiation of the Reading Apprenticeship professional learning model:

- Face-to-face professional development for teachers
- Online moderated discipline-specific PLC meetings
- Teacher Leader–supported school-based site team meetings

For the purpose of the implementation study, teachers who do not participate in any of these activities are not considered to have participated in RAAD. Program staff established FOI thresholds for professional development attendance based on a combination of face-to-face training and PLC meetings. Teachers attending more PLC meetings can meet the threshold with fewer face-to-face sessions, and vice versa. Four specific thresholds are considered as having implemented the professional development portion of program implementation with fidelity:

- 2 days of face-to-face training and at least 6 PLC meetings, or
- 3 days of face-to-face training and at least 4 PLC meetings, or
- 4 days of face-to-face training and at least 3 PLC meetings, or
- 5 days of face-to-face training and at least 2 PLC meetings.[15]

In this section, we analyze the extent to which the established FOI thresholds for professional development attendance were met. We define two fidelity of implementation metrics, one at the teacher level and one at the school level. Year 1 teachers who meet the thresholds in Year 1 or Year 2 teachers who meet the thresholds in either or both study years are considered to have implemented RAAD with fidelity. The definition for program implementation with fidelity was the same across Year 1 and Year 2 teachers. However, Year 2 teachers are considered to have implemented with fidelity if they met the professional development attendance requirements during either one or both years. School-level FOI threshold was set as a school having a Teacher Leader and having at least half of the participating teachers meet the individual FOI threshold.

[15] The thresholds were developed with attendance at PLC and/or school team meetings in mind. However, because only PLC meeting attendance data are reliably available, these thresholds were applied to available data.

Fidelity of Implementation Findings

Overall, high percentage of teachers and schools implementing RAAD with high fidelity. Exhibit 18 shows the percentage of teachers and schools meeting the FOI threshold in Year 1 and Year 2.[16] All treatment schools identified Teacher Leaders and 74% of schools met the FOI threshold in both years. In Year 1, 68% of teachers in treatment schools met FOI thresholds, while 69% met FOI thresholds in Year 2.

Exhibit 18. Percentage Meeting FOI Threshold

	Teachers	Schools
Year 1	68%	74%
Year 2	69%	74%

SOURCE: Attendance data from program staff.

Exhibit 19 breaks down percentage of teachers and schools meeting the FOI threshold by block. Although the overall percentage of schools meeting FOI threshold is high, Block B and Block F consistently had the lowest number of teachers implementing RAAD with high fidelity. Block B had the lowest percentage of teachers meeting FOI, with only 35% in Year 1 and 28% in Year 2 implementing RAAD with high fidelity. When looking at implementation at the school level, 5 out of the 19 treatment schools (26%) failed to meet the school FOI threshold in both years. Four of these schools came from Block B (two remaining schools in the block did meet the threshold). Block A also had one of the lowest percentages of schools meeting FOI thresholds, with only one out of two schools satisfying the requirement.

The variation in the percentage of teachers and schools meeting FOI is in line with the feedback received about the face-to-face trainings and PLC meetings. Blocks B and F had the lowest attendance numbers for these meetings.

Exhibit 19. Block-Level Percentage of Teachers and Schools Meeting FOI Threshold

	Teachers						Schools		
	Year 1			Year 2			Years 1 and 2		
	N	N FOI=1	% FOI=1	N	N FOI=1	% FOI=1	N	N FOI=1	% FOI=1
Overall	81	55	68%	83	57	69%	19	14	74%
By Block									
A	9	6	67%	9	7	78%	2	1	50%
B	17	6	35%	18	5	28%	6	2	33%
C	23	18	78%	24	19	79%	4	4	100%
D	12	9	75%	12	10	83%	3	3	100%
E	13	12	92%	13	12	92%	2	2	100%
F	7	4	57%	7	4	57%	2	2	100%

NOTE: FOI for Year 2 is satisfied if Year 2 teachers satisfied the attendance requirements either in one or over both study years.
SOURCE: Attendance data from program staff.

[16] Results include teachers who replaced original participants, as well as teachers who were ineligible in 2016–17 but became eligible in 2017–18. Replacement teachers had the opportunity to participate in face-to-face professional development as needed throughout Year 2.

6.3. RAAD Professional Development

RAAD professional development was delivered in face-to-face training, with implementation support through online professional learning community meetings and school team meetings over the course of two school years. In the following sections, we describe the three professional development components, participation levels of treatment teachers, and their perceptions of each of the professional development components. Whenever possible, we report implementation findings for the following samples of teachers: (1) for participating teachers during Year 1 (all teachers and a subset of high-fidelity teachers meeting the FOI thresholds above), and (2) for participating teachers during Year 2 (all teachers, a subset of the original teachers who were part of the initial recruitment from Year 1, and a subset of high- fidelity teachers). Note that data for Year 2 teachers reflects cumulative professional development attendance. Furthermore, the Year 2 all-teachers sample includes any teacher who was active during the second study year—teachers who attended professional development in Year 1 and remained in the study in Year 2, as well as replacement teachers who joined later and attended professional development in Year 2.

Face-to-Face Training

WestEd offered Reading Apprenticeship professional learning to teams of 3 to 8 teachers per school, including at least one 8th-grade ELA teacher. The professional development drew from WestEd's extensive toolbox of curriculum examples, lesson models, support materials, classroom videos, and assessments to support implementation of the Reading Apprenticeship instructional framework. Trained facilitators led the professional development for a total of 5 days (32.5 hours) of face-to-face professional learning—3 days in the summer and 2 days in the winter during Year 1. Replacement teachers had the opportunity to participate in face-to-face training in the first study year and into the second study year. They were also offered catch-up work involving reading excerpts from *Reading for Understanding* and responding in writing to those excerpts using an online form.

Face-to-Face Training Participation

Participation in face-to-face training was determined based on attendance taken by training facilitators. Exhibit 20 presents the average number of training days attended by participating teachers overall and by block. Overall, teachers participated at a high rate, with the majority of teachers attending about 4 out of 5 of the face-to-face training days. Teachers who implemented RAAD with high-fidelity and original teachers[17] reported higher average attendance for the face-to-face training days. On average, original teachers attended 4.46 days and high-fidelity teachers attended 4.68 training days over the 2 years of the study. Average teacher attendance varied by block, with teachers in Blocks B, D, and F attending on average just over 3 days.

[17] Original teachers means teachers who were recruited into the study before Year 1 implementation and remained in the study throughout. By contrast, replacement teachers joined the study after teachers had dropped out of the study.

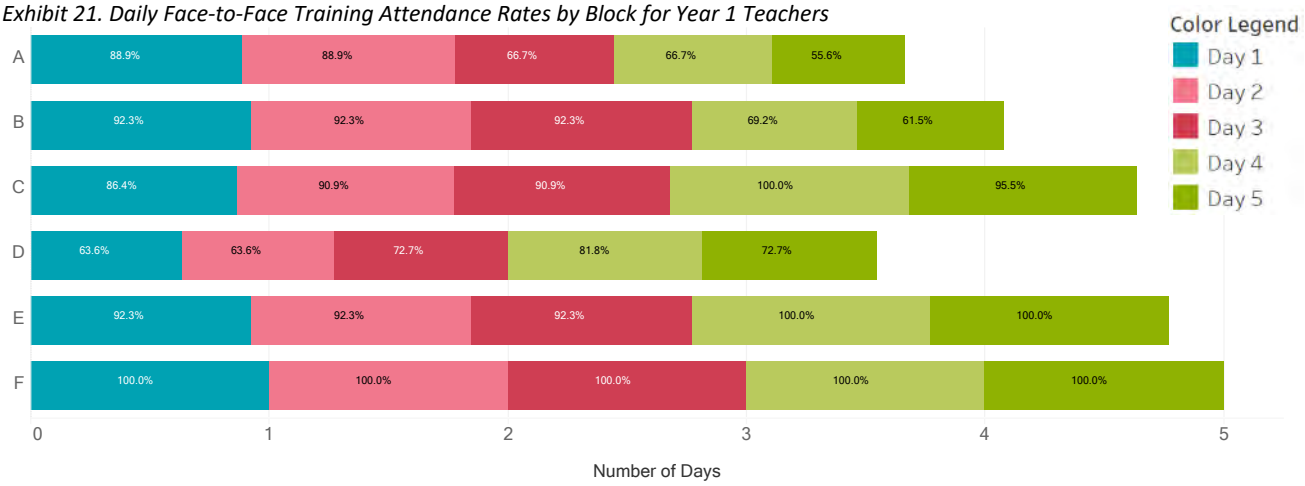
Exhibit 20. Average Number of Face-to-Face Training Days Attended

Average Number of Face-to-Face Days Attended	Year 1 Teachers				Year 2 Teachers					
	All		High-Fidelity		All		Original		High-Fidelity	
	Avg	n	Avg	n	Avg	n	Avg	n	Avg	n
Overall	4.40	73	4.76	55	3.88	83	4.46	66	4.68	57
By Block										
A	3.67	9	4.17	6	4.11	9	4.11	9	4.29	7
B	4.08	13	5.00	6	3.06	18	4.40	10	5.00	5
C	4.64	22	5.00	18	4.29	24	4.71	21	4.89	19
D	3.55	11	4.11	9	3.42	12	3.55	11	3.90	10
E	4.77	13	5.00	12	4.85	13	5.00	11	5.00	12
F	5.00	5	5.00	4	3.29	7	5.00	4	5.00	4

NOTE: The criteria for teachers meeting the high-fidelity threshold are presented in section 6.3.
SOURCE: Attendance data from program staff.

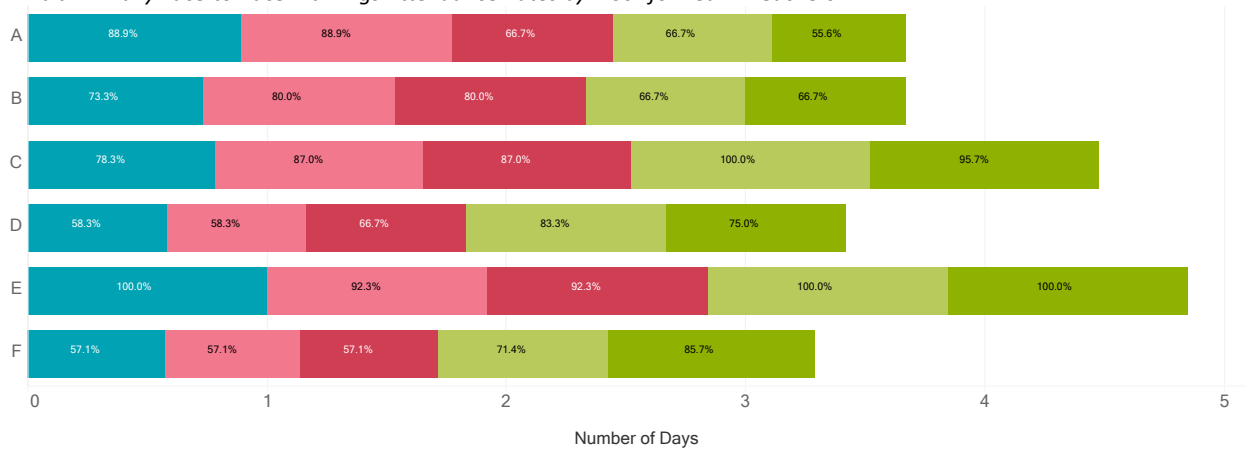
Exhibit 21 and Exhibit 22 present the daily attendance rates for participating teachers for each face-to-face training day by block. Attendance was higher at the Winter Training Institute compared with the Summer Institute in 4 out of the 6 blocks. Teachers from Block D reported the lowest attendance during the first 2 days of training, but their attendance improved for the subsequent training days.

Exhibit 21. Daily Face-to-Face Training Attendance Rates by Block for Year 1 Teachers



NOTE: Days 1 to 3 occurred during summer training, while Days 4 and 5 occurred during winter training.
Number of Observations by Block—Block A (n=18), B (n=29), C (n=41), D (n=29), E (n=24), F (n=14).
SOURCE: Attendance data from program staff.

Exhibit 22. Daily Face-to-Face Trainings Attendance Rates by Block for Year 2 Teachers



NOTE: For this sample, most teachers attended the training during Year 1 with 3 days in the summer training and 2 days during winter training. However, replacement teachers attended these trainings in Year 2 when scheduled.
Number of Observations by Block—Block A (n=18), B (n=34), C (n=48), D (n=30), E (n=26), F (n=17).
SOURCE: Attendance data from program staff.

Face-to-Face Training Feedback

Researchers asked about the overall face-to-face training experience, including perceived benefits and challenges faced during focus group sessions held at three sites (N=26).[18] Specific discussion questions can be found in the focus group protocol, Appendix 10.9. Overall, focus group participants reported that the face-to-face training sessions were valuable. In most focus group sessions, participants did not report any challenges with face-to-face training. The benefits most often reported included collaboration with peers, learning new strategies, reigniting enthusiasm about Reading Apprenticeship concepts, and getting to see the Reading Apprenticeship strategies modeled by WestEd facilitators. One Block C teacher said, "I've been teaching for 14 years in this district, and this is the first time I actually found meaning and purpose to something. . . . There have been real good workshops, don't get me wrong, but this one gives us autonomy."

Though most teachers did not report any challenges with the face-to-face training, teacher perceptions varied across blocks. Block F focus group participants raised more concerns than other participants. Teachers in the Block F focus group reported that the face-to-face training included too little interaction and discussion and too much lecturing. They also mentioned that they wished that the face-to-face training allowed for more time for teachers to engage in lesson planning, both with other teachers in their school as well as with those from other schools. One Block F teacher noted, "We need more time [during the training] to plan lessons as a team since we are implementing this, because honestly we don't get time at school." Also, a few teachers in the Blocks C and F groups noted that they thought the facilitators attempted to cover too much material during trainings.

Online Professional Learning Community Meetings

PLC meetings offered opportunities for teachers to meet online synchronously ("live") in small subject-area specific groups, in small video conference groups moderated by a WestEd Reading Apprenticeship facilitator. Meetings took place after school or during the evening and took place 8 times over the course of each school year. During PLC meetings, teachers discussed their successes and challenges implementing

[18] The RAAD teacher surveys did not cover face-to-face training.

Reading Apprenticeship in their classrooms. Online PLC meetings were designed as an opportunity for RAAD teachers to support and learn from their peers. Rather than passively watching videos or reading solo texts, teachers were expected to have done some preparation and to engage in reflection on their practice, and they are expected to listen and respond to others doing the same. PLC goals and guidelines called for teachers to be reflective and ready to discuss and present their experiences implementing Reading Apprenticeship in a collaborative manner. Through this engagement, teachers were expected to discuss Reading Apprenticeship strategies and concepts, share resources for literacy instruction, and share challenges as well as successful lessons. In addition, asynchronous learning opportunities included facilitated text-based discussion forums. Teachers responded to an excerpt from a chapter of Reading for Understanding and the comments of their fellow PLC members by posting to the discussion forum. In total, reading, reflecting, and posting were designed to take approximately 60 minutes.

SLI initially proposed that Regional Partners would carry out the online PLCs after apprenticing with SLI staff to learn the protocols. In the first year of the project, SLI learned this was not feasible for the partners, most of whom were new to Reading Apprenticeship and needed time to learn about the approach, the professional learning model, and the online components of the model. Furthermore, most of these regional agencies supported diverse initiatives and were unable to devote staff time flexibly to schedule and hold online PLCs. SLI adjusted the proposed work, taking on the task of facilitating online PLCs for cross-site, content-area–specific small groups of participating teachers.

Online PLC Meeting Participation

Exhibit 23 presents the average number of online PLC meetings attended by participating teachers overall and by block.[19] For active teachers in Year 2, we present cumulative attendance over both study years. On average, Year 2 teachers attended close to 7 PLC meetings over the course of the study. Although no teachers attended all PLC meetings, teachers who implemented RAAD with high-fidelity and original teachers attended a higher number of PLC meetings—on average 9.28 and 8.07, respectively. PLC attendance varied substantially by block, with Year 2 teachers in Blocks B and F attending fewer than half of the meetings.

[19] Note that data for Year 2 teachers reflects PLC meeting attendance of all teachers—including original teachers and replacement teachers.

Exhibit 23. Average Number of PLC Meetings Attended

Average Number of PLC Meetings Attended	Year 1 Teachers (Over Year 1)				Year 2 Teachers (Over Year 1 & Year 2)					
	All		High-Fidelity		All		Original		High-Fidelity	
	Avg	n	Avg	n	Avg	n	Avg	n	Avg	n
Overall	4.25	73	5.24	55	6.64	83	8.07	66	9.28	57
By Block										
A	4.33	9	6.00	6	8.22	9	8.22	9	10.57	7
B	1.77	13	3.00	6	1.17	18	2.10	10	3.60	5
C	4.41	22	5.11	18	7.54	24	8.62	21	9.42	19
D	5.82	11	6.33	9	11.33	12	11.18	11	12.20	10
E	5.47	13	5.83	12	8.62	13	9.64	11	9.08	12
F	3.20	5	3.75	4	3.86	7	6.75	4	6.75	4

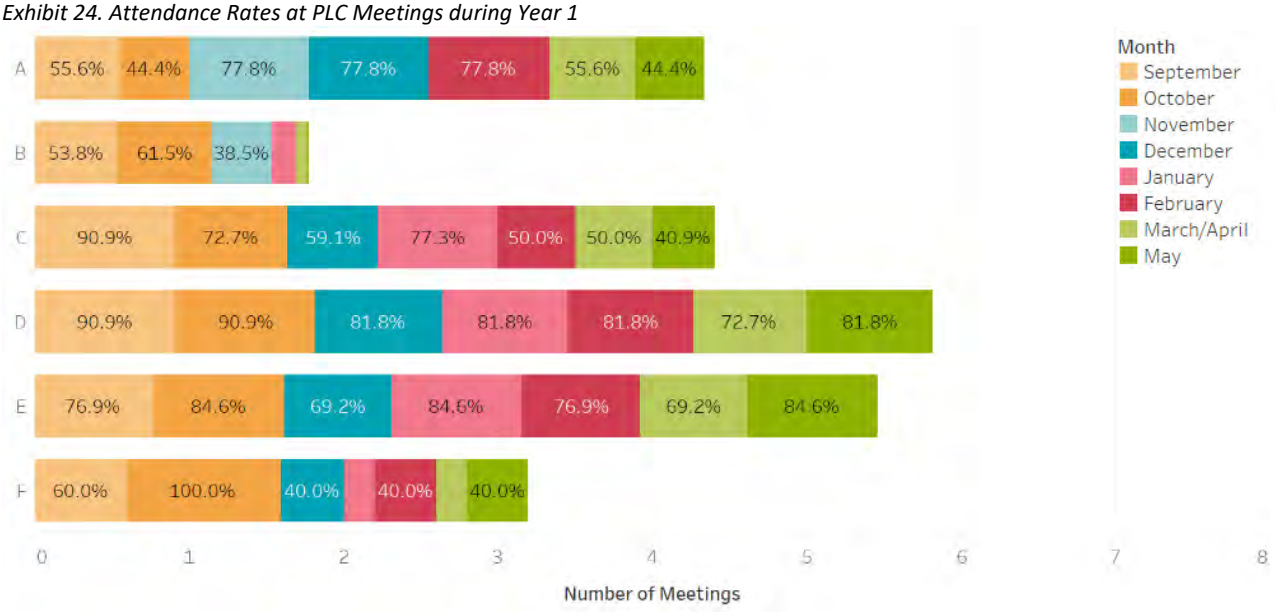
NOTE: The criteria for teachers meeting the high-fidelity threshold are presented in section 6.3. The numbers presented for Year 2 teachers show average attendance over both study years. As discussed in the text, teachers are considered to have implemented RAAD with high fidelity if they satisfy the requirements over either or both study years.
SOURCE: Attendance data from program staff.

Exhibit 24 and Exhibit 25 present PLC meeting attendance grouped by month to highlight patterns over time in Year 1 and Year 2, respectively. Overall, attendance at PLC meetings was higher in middle of Year 1 (or the end of the calendar year and the start of the next calendar year), as reported by collected attendance by program staff and self-reported in the teacher surveys. Attendance in most blocks tended to drop off near the end of the school year.

Attendance at PLC meetings at the beginning of Year 1 was affected due to the reported technical issues that prevented participation. These issues lessened over time as teachers became familiar with the online platform. In Year 2, the platform for online PLC meetings shifted from Blackboard Collaborate to Zoom, which had fewer technological issues. Nevertheless, attendance in Year 2 was lower than the first year, with teachers attending fewer PLC meetings at the end of the second year compared with the beginning of Year 1.

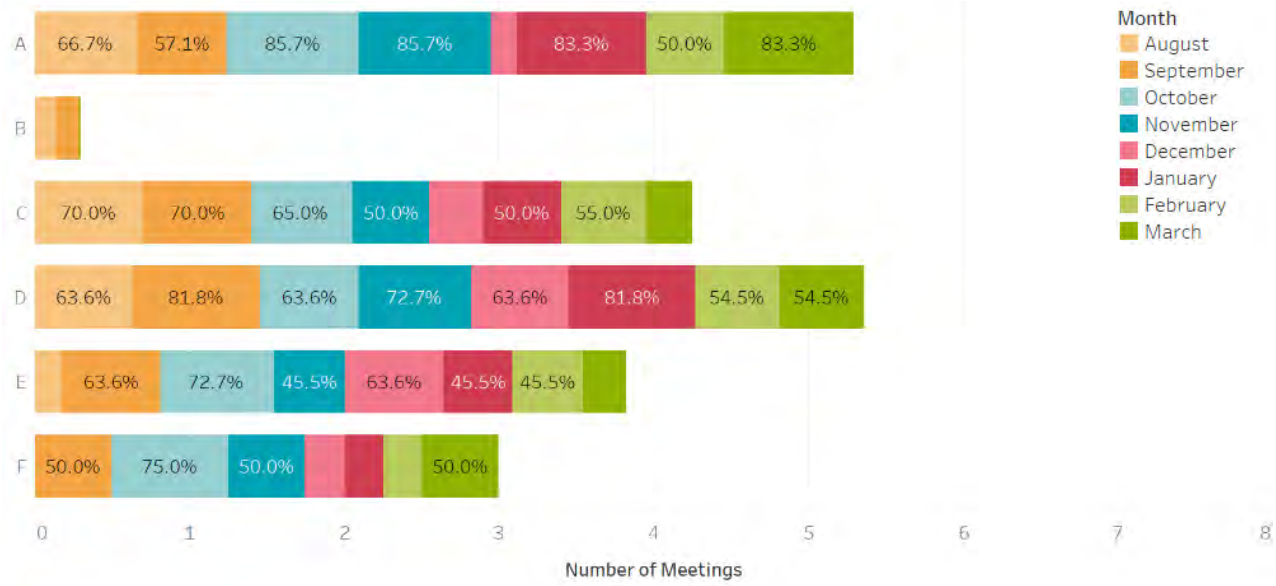
PLC meeting attendance also substantially varied across blocks. Teachers from Block D had the highest attendance of PLC meetings. In Block B, attendance was very low for the final three PLC meetings during Year 1, and only 5 out of the 8 PLC meetings were attended by any Block B teachers. This mirrors what we saw in the teacher survey, where some Block B teachers reported that they did not attend any PLC meetings in Year 1. We also see a big dropoff in the rate of attendance in Block F, where fewer than half of the study teachers attended any of the PLC meetings after October of the first study year. During Year 2, Block D had the highest attendance, while attendance in Block B was close to nonexistent. Block F also had a consistently low rate of attendance, with no more than half of study teachers attending PLC meetings.

Exhibit 24. Attendance Rates at PLC Meetings during Year 1



NOTE: The 8 PLC meetings did not necessarily convene on a set monthly schedule. Each meeting tended to fall within a specific month, so to make presentation clearer, we illustrate the attendance rates here by grouping meetings that happened in a given month.
Number of Observations by Block—Block A (n=9), B (n=13), C (n=22), D (n=11), E (n=13), F (n=5).
SOURCE: Attendance data from program staff.

Exhibit 25. Attendance Rates at PLC Meetings during Year 2



NOTE: The 8 PLC meetings did not necessarily convene on a set monthly schedule. Each meeting tended to fall within a specific month, so to make presentation clearer, we illustrate the attendance rates here by grouping meetings that happened in a given month.
Number of Observations by Block—Block A (n=7), B (n=8), C (n=20), D (n=11), E (n=11), F (n=4).
SOURCE: Attendance data from program staff.

When asked on the survey about the primary reasons for not attending PLC meetings, teachers were most likely, across all surveys, to report technical issues and other obligations. In the open-ended responses, many teachers specified other obligations such as child care and/or family scheduling, as well as coaching

or supervising afterschool activities. Also, based on the open-ended responses, it appears that earlier PLC meetings possibly interfered with start-of-school-year activities such as teacher meetings and back-to-school nights, which teachers mentioned attending both for their own children and for their students. Open-ended responses from surveys later in the school year were more likely to mention not considering the PLC meetings useful, or only wanting to attend if a specific individual were facilitating.

PLC Meeting Feedback

PLC meetings were reported as the most challenging professional development component in both teacher survey responses and focus group feedback. Exhibit 26 presents perspectives on the degree of helpfulness of the PLC meetings for respondents to the 4 surveys administered during timeframes when PLC meetings occurred. Overall, teacher survey responses were unfavorable regarding the helpfulness of the PLC meetings, and the degree of unfavorable responses increased over time. The final teacher survey reflected the highest degree of unfavorable ratings. Teachers from Blocks D and E responded with the highest degree of unfavorable responses. For original teachers, the same trend was found in unfavorable ratings regarding the helpfulness of the PLC meetings throughout the study, increasing over time. However, an exception to the prevalence of unfavorable responses was the group of teachers with high fidelity. These teachers found PLC meetings to be helpful to some degree, particularly in Block C.[20]

In certain blocks, the number of respondents was small for certain survey administrations, which may result in a larger reported percentage of unfavorable responses. In addition, some blocks (particularly Block B) had many respondents that did not give feedback on this question. Teachers may have skipped this question because they did not attend any (or only attended a small number of) PLC meetings. As a result, it is difficult to gauge their reaction to the PLC meetings.

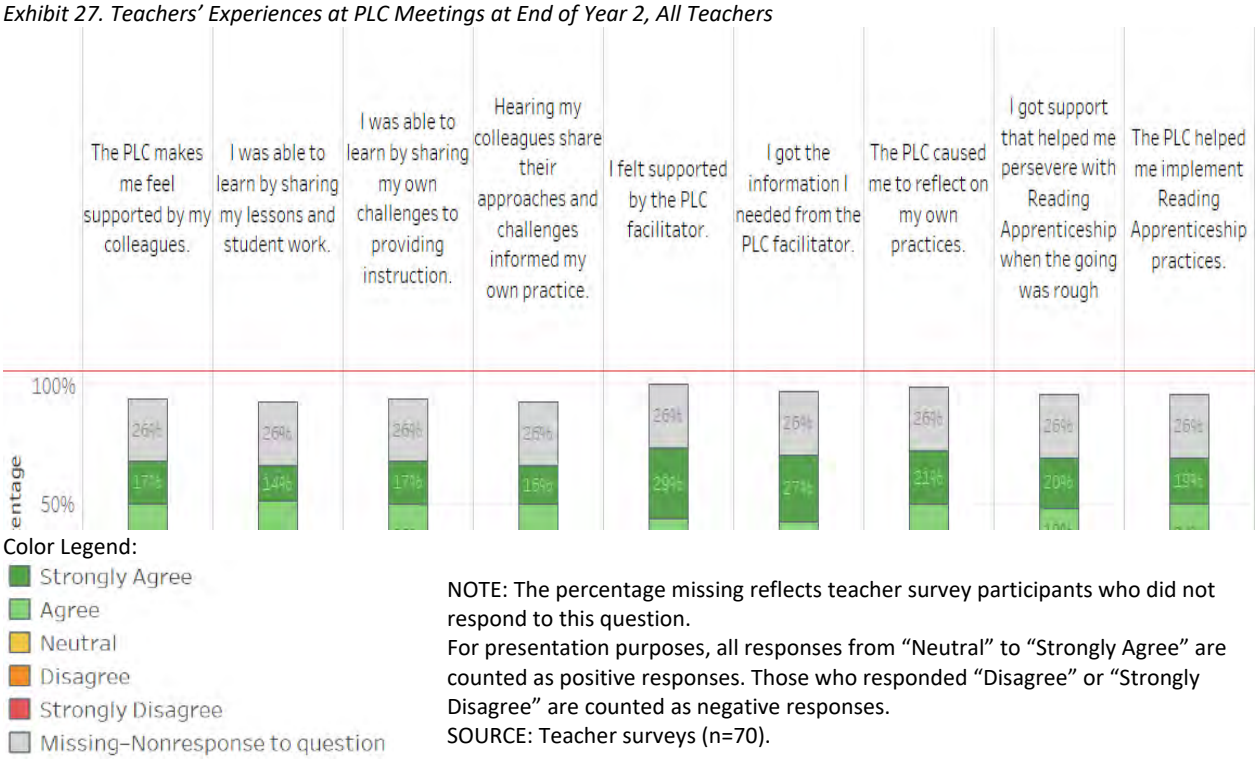
Exhibit 26. PLC Meeting Feedback by Survey and Block, All Teachers

NOTE: The percentage missing reflects teacher survey participants who did not respond to this question.
For presentation purposes, all responses from "Moderately helpful" to "Very helpful" are counted as positive responses. Those who responded feeling PLC meetings were "Less than moderately" or "Not at all" helpful are counted as negative responses.
SOURCE: Teacher surveys.

Despite the teachers' negative responses to the helpfulness of the PLC meetings, when asked about their experience at the PLC meetings, teachers gave relatively positive responses. Exhibit 27 presents the teacher feedback. Note, once again, the large amount of missing data; some teachers did not respond to the question. Most of these teachers are from Block B, which had lower PLC meeting attendance.

[20] Survey responses for original and high-fidelity teachers are not presented visually.

Exhibit 27. Teachers' Experiences at PLC Meetings at End of Year 2, All Teachers



NOTE: The percentage missing reflects teacher survey participants who did not respond to this question.
For presentation purposes, all responses from "Neutral" to "Strongly Agree" are counted as positive responses. Those who responded "Disagree" or "Strongly Disagree" are counted as negative responses.
SOURCE: Teacher surveys (n=70).

In addition, focus group responses from fall of Year 1 regarding PLC meetings echoed the survey responses. Participants at every site reported technical problems while participating in the PLC meetings, including navigation difficulties, difficulties logging on, and inability to share experiences because too many teachers were on the PLC platform at one time. The most common feedback was that the system is not user friendly. One Block B teacher summed it up by saying, "The online portion of it, the digital part of this, is really wonky in terms of the technology." Open-ended answers in the teacher surveys reflected the same challenges: technical issues, too many people in a single PLC meeting, and scheduling conflicts that interfered with the PLC meetings. Program designers responded to technological challenges in the PLC meetings in the second project year in multiple ways. Summer face-to-face sessions were revised to include introduction to the online platform and processes. Program designers also moved the PLC meetings to Zoom, a more user-friendly platform in the second project year.

Though focus group participants reported technological and platform challenges, some also noted great benefits from the PLC meetings. One Block F teacher said, "All these ideas in an hour, and after I log off, I sit there and I'm like, wow, this is very, very helpful." Other Block F teachers noted that the PLC meetings allow teachers to bring up classroom problems with Reading Apprenticeship implementation, and discussing these problems during PLC meetings can lead to solutions. Block C teachers reported that the regular schedule keeps them on track. Each teacher found it easy to schedule a time to attend that was convenient for him/her, though teachers in other regions reported scheduling as a barrier to participation. Block B teachers noted that it was nice to be able to communicate with teachers in other areas of the country.

Both teacher surveys and focus group feedback reflected logistical challenges with PLC meetings, particularly in initial sessions. After experiencing logistical challenges in these first meetings, some teachers may have become discouraged from attending PLC meetings as the school year progressed. Challenges with meeting content appear to be of secondary importance for low attendance, particularly because survey responses and focus group feedback both reported positive responses to the PLC meetings.

School Team Meetings

Teacher Leaders were asked to convene and facilitate monthly multidisciplinary school-based meetings with the RAAD teacher participants at their school. Schedules for school team meetings were determined at each school. WestEd gave material resources and support for these meetings. As with PLC meetings, school team meetings were intended as an opportunity for RAAD teachers to support and learn from local colleagues. Through this engagement, teachers were encouraged to work toward implementing Reading Apprenticeship in their classrooms.

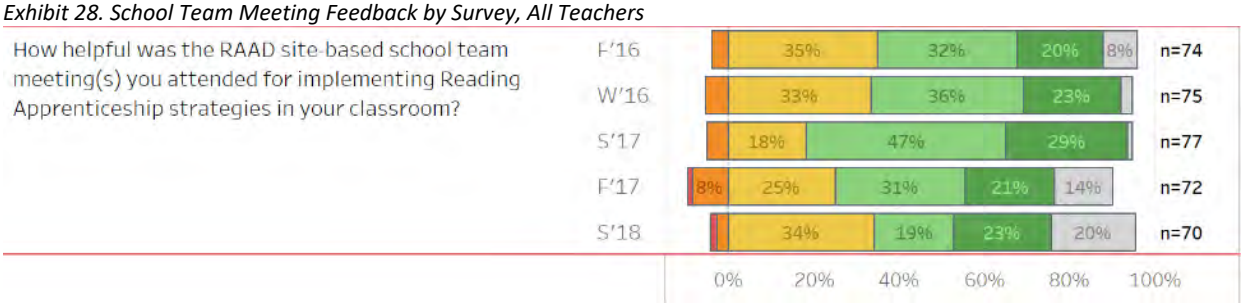
School Team Meeting Participation

Data about attendance at monthly school team meetings was not formally collected, although Teacher Leaders were asked to describe team attendance and the focus of team meetings at the quarterly Teacher Leader meetings, posting reflections and agendas on Padlets. More formal record keeping was not undertaken due to logistical challenges. It would rely on Teacher Leaders for accurate collection, as well as project leaders' focus on emphasizing the importance of the content of the professional learning opportunity over "compliance with attendance". However, the teacher survey included a question asking teachers how many team meetings they attended. In both Year 1 and Year 2 surveys, teachers indicated that school team meetings were well attended, with almost all teachers reporting that they attended at least one school team meeting. When asked on the survey about the primary reasons for not attending school team meetings, teachers were most likely to report scheduling conflicts. Furthermore, teachers reported in some focus groups that although they attended school team meetings in the beginning of Year 1, administrators often used the meeting time for purposes other than RAAD, suggesting that attendance in school team meetings may not directly translate to time spent discussing RAAD implementation.

School Team Meeting Feedback

School team meetings were reported as helpful in both teacher surveys and focus group sessions, though teachers pointed out that meetings were difficult to schedule and often not supported by administrators. In teacher survey responses, overall ratings of team meetings were favorable for all teachers across all blocks. School team meetings were most often reported as helpful, compared to PLC meetings and face-to-face training. Teachers also reported that the school team meetings were likely to make them feel supported by colleagues, and that they learned by sharing their classroom strategies and challenges with other teachers. High-fidelity teachers and original teachers had the same trends of reporting both helpfulness and scheduling difficulties in survey responses.[21] Exhibit 28 and Exhibit 29 present these findings. However, as time went on, a smaller number of teachers gave feedback on school team meetings. This is reflected in the exhibits, showing the percentage of nonresponse for each survey question.

Exhibit 28. School Team Meeting Feedback by Survey, All Teachers



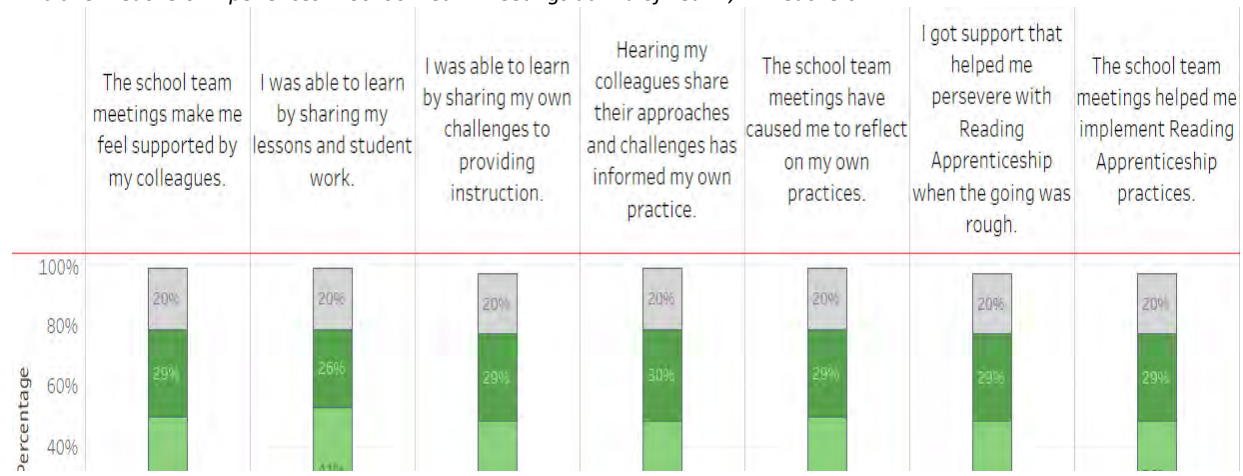
[21] Survey responses for original and high-fidelity teachers are not presented visually.

Color Legend:

- Very
- More than moderately
- Moderately
- Less than moderately
- Not at all
- Missing–Nonresponse to question

NOTE: For presentation purposes, all responses from "Moderately helpful" to "Very helpful" are counted as positive responses. Those who responded feeling PLC meetings were "Less than moderately" or "Not at all" helpful are counted as negative responses.
SOURCE: Teacher surveys.

Exhibit 29. Teachers' Experiences in School Team Meetings at End of Year 2, All Teachers



Color Legend:

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- Missing–Nonresponse to question

NOTE: The percentage missing reflects teacher survey participants who did not respond to this question.
For presentation purposes, all responses from "Neutral" to "Strongly Agree" are counted as positive responses. Those who responded "Disagree" or "Strongly Disagree" helpful are counted as negative responses.
SOURCE: Teacher surveys in spring 2018 (n=70).

Teachers in all focus groups also reported that team meetings were logistically challenging. Teachers agreed that accommodating teacher and school schedules made planning the team meetings difficult. In addition, support for team meetings from school administration varied widely among schools. Some focus group participants reported that administrators helped schedule the meetings and attended them, while others reported that administrators interrupted meetings and/or asked teachers to cover content unrelated to RAAD. In Block C, a few teachers reported that a school administrator stepped in to make sure the team meetings were scheduled and attended. However, a teacher in another Block C school stated, "We do need a little bit more support from admin. Sometimes admin. has no idea what's going on." In addition to dealing with scheduling issues, Block B and F teachers reported difficulties due to teacher attrition and changing teacher assignments. Block B teachers reported the most difficulty in scheduling team meetings. In fact, none of the Block B schools were holding regular team meetings, and when meetings were held, they were less than an hour, some lasting only 20 minutes. Also, Block B teachers expressed confusion over who should attend and who should lead the team meetings.

All focus group participants expressed that when team meetings were held, they were beneficial, allowing teachers to share strategies for implementation, talk about dealing with struggles, and exchange ideas. One Block C teacher described the meetings as "a place where we come together and refocus." Some Block F teachers shared that they felt they got more out of the team meetings than the other professional

development components, with one teacher saying "you're hearing what [the other teachers are] doing, and you get new ideas, what's working for them, what's not working for them, [team meetings are] more of a valuable learning experience, versus being presented with the strategies that are working or aren't working. . . ." In all focus group sessions, teachers shared that the reinforcement they received from other teachers during team meetings helped them feel supported and strengthened their understanding and use of Reading Apprenticeship strategies.

Teacher survey responses and focus group feedback both reported that school team meetings were helpful when held, though they were difficult to schedule and attend. The high amount of favorable ratings and feedback may indicate a high level of teacher engagement in a face-to-face setting with peers. Furthermore, enthusiasm for the Reading Apprenticeship strategies and their new teaching practices was a common theme reported with school team meeting feedback from the survey and focus group data.

Implementation of Teacher Leaders

As detailed in section 2.1, Teacher Leaders played an integral part in implementation of the RAAD program at the school level. Each of the 19 schools in the treatment group identified a Teacher Leader before school year 2016–17. Before Year 2 of the study, school year 2017–18, Teacher Leaders were asked to recommit, and if unable to continue in this role, the research team worked with school principals to identify a new Teacher Leader. Teacher Leaders showed strong commitment to the intervention, even though a 2-year commitment was not requested at the outset. Ten of the 19 school Teacher Leaders remained throughout Year 1 and Year 2, and others continued their involvement despite their classes becoming ineligible for data collection. Two Teacher Leaders in Year 1 and 4 Teacher Leaders in Year 2 had classes that became ineligible for data collection due to teaching reassignment but remained Teacher Leaders for their schools. However, we do not have survey responses for Teacher Leaders whose classes were ineligible for data collection.

Within implementation findings, Teacher Leaders consistently reported higher attendance rates for all professional development venues, leading to higher FOI rates within the Teacher Leader group (see Exhibit 30). The higher attendance rates among Teacher Leaders may be, in part, due to the Teacher Leader responsibility to schedule and facilitate the school team meetings, since Teacher Leaders would be more likely to schedule the team meetings at a time they could attend. They were also more likely to see the value and importance in the other regularly scheduled professional development sessions, such as the online PLC meetings and face-to-face trainings. Teacher Leaders were also more likely, on average, to report favorably on RAAD strategies. The more favorable ratings of RAAD strategies reported by Teacher Leaders may be due to the Teacher Leader–only meetings held across both study years (a series of 6 cross-school meetings, 3 held each year). These meetings were facilitated by regional partners in consultation with the SLI central office, as an opportunity for Teacher Leaders to share best practices and problem solve regarding implementing Reading Apprenticeship strategies in the classroom and school team meeting facilitation. The Teacher Leader–only meetings were designed to give Teacher Leaders a deeper understanding of the Reading Apprenticeship framework and approach. This itself may have led to higher levels of implementation in the classroom and therefore a more favorable perception of student impact and response.

Exhibit 30. Teacher Leader PD Attendance (include Face-to-face Training and Online PLCs)

	Year 1 Average (n=12)	Year 2 Average (n=7)
Face-to-Face Training Days Attended	4.83	5.29
PLC Meetings Attended	5.75	10.57†

NOTE: The PLC attendance numbers presented for Year 2 teachers show average attendance over both study years.
SOURCE: Attendance data from program staff.

6.4. Factors that Supported and Challenged Implementation

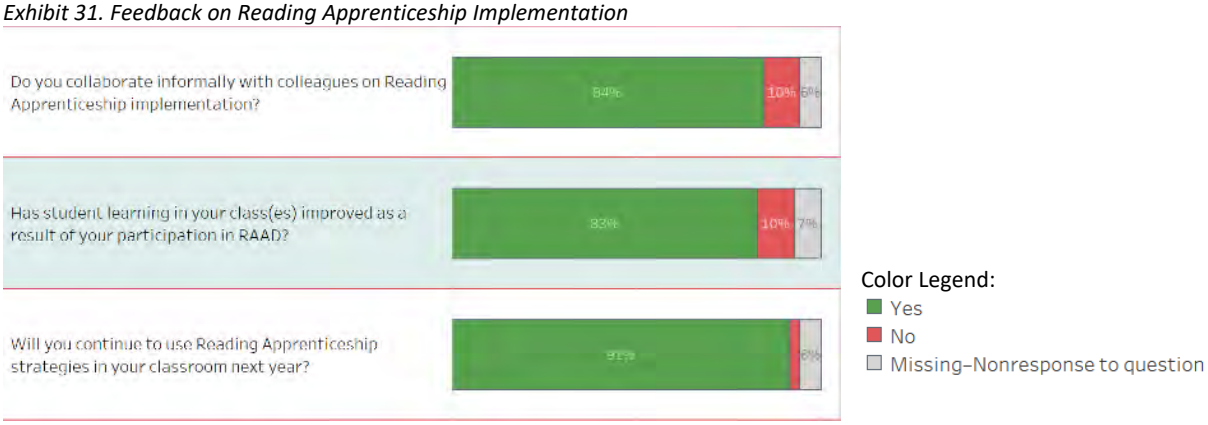
Successes of Reading Apprenticeship Implementation

Overall, teachers shared positive feedback on implementing Reading Apprenticeship in their classrooms. As reflected in Exhibit 31, 83 percent of teacher survey respondents reported that student learning improved as a result of RAAD participation. Similarly, the most common theme to arise during focus groups was the positive influence of Reading Apprenticeship on students. Teachers observed advances in metacognitive learning, greater confidence in reading, and improved leadership skills, and they attributed this to their use of the Reading Apprenticeship approach.

In all focus group sessions, participants reported that the biggest changes among their students were an increase in classroom engagement, demonstration of stronger leadership skills, a new sense of empowerment, and improved confidence. Most teachers attributed the improved confidence to the fact that students felt part of the learning strategy process. Furthermore, the majority of teachers interviewed in focus group sessions thought that students were making strong connections within texts, evidenced by student notes, high grades, and correct answers given in class. In all focus group sessions, many teachers shared that, compared with previous years, students were more engaged in the learning process and more likely to ask questions, share with others, and participate in classroom activities.

The overall positive feedback reported in teacher surveys and focus group sessions on implementing Reading Apprenticeship in the classroom is largely due to the perceived improvements in student learning and behaviors observed by teachers. The focus of Reading Apprenticeship strategies on student engagement in learning and reading appears to be the factor most cited as leading to improved learning and confidence. Finally, the positive influences on students reported by teachers are likely to lead to continued use of the Reading Apprenticeship strategies, further addressed in section 6.6.

Exhibit 31. Feedback on Reading Apprenticeship Implementation



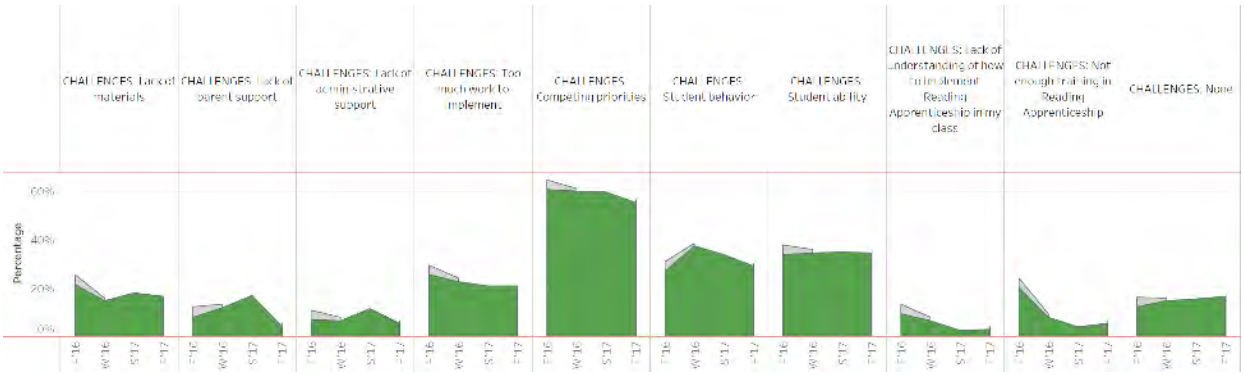
SOURCE: Teacher Survey in spring 2018. (n=70)

Challenges to Reading Apprenticeship Implementation

Teachers also reported challenges to Reading Apprenticeship implementation. Both survey and focus group feedback focused on time and competing priorities as the biggest challenge. Feedback on administrative and leadership support varied greatly by block. Some blocks reported leadership support as a challenge in both surveys and focus groups, while other blocks reported that their administration was helpful and supportive of implementing the Reading Apprenticeship strategies in the classroom.

Teacher survey responses consistently identified the same challenges to implementing Reading Apprenticeship in the classroom. As presented in Exhibit 32, about 60% of teachers cited "competing priorities" as a challenge to implementing Reading Apprenticeship. About 30% of teachers viewed "student behavior" and about 35% of teachers viewed "student ability" consistently as challenges to implementation over the course of the study. Understanding how to implement the strategies did not pose a challenge to the majority of teachers. Only about 20% of teachers noted that a lack of Reading Apprenticeship training was a challenge to implementation, but this percentage decreased over the course of the study. This pattern is likely due to the timing of the first survey, which was administered before the Winter Institute. About 25% of teachers thought that Reading Apprenticeship was "too much work to implement."

Exhibit 32. Implementation Challenges, Over Time



NOTE: Survey question asked "What challenges have you faced in implementing Reading Apprenticeship? (Select all that apply)."
SOURCE: Teacher surveys. (Fall 2016: n=148; Winter 2016: n=150: Spring 2017: n=77; Fall 2017: n=144)

In all focus groups, teachers reported that lack of time and resources were the greatest challenges to successful Reading Apprenticeship implementation. Many teachers noted that embedding Reading Apprenticeship strategies in their lessons increased the time previously required for lesson planning. Teachers thought that Reading Apprenticeship required them to find reading resources for class assignments that offered students variety, could be adapted to learning levels and student preferences, and worked well with Reading Apprenticeship strategies and tools. Resource searching, reading, and review added substantial time to lesson planning. Similarly to teacher survey feedback, some teachers in the focus group sessions discussed student behavior and ability as a challenge, specifically for special student populations such as special education and low-achieving students.

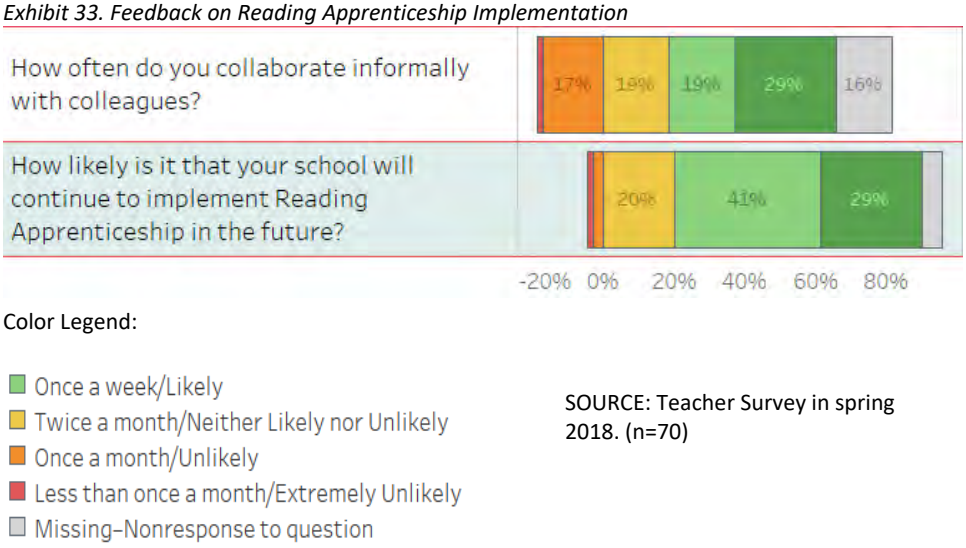
In summary, training and comprehension of Reading Apprenticeship strategies were not frequently reported as an obstacle to implementation by teachers. To the extent that implementation of Reading Apprenticeship was reported as challenging in survey and focus group feedback, it came through as needing more time for preparation.

This Reading Apprenticeship intervention was implemented with greater involvement of local institutional partners. Implementing RAAD by relying heavily on regional partners rather than SLI's trained team of coaches and trainers came with its own challenges and complexities. Formative data collected by SLI research staff revealed that lack of administrative support for the program, multiple competing initiatives being rolled out at the same time, and lack of understanding about the blended learning model were most common challenges at the partner level. Specifically, literacy coaches from Block B were responsible for supporting multiple initiatives simultaneously. Sometimes this meant that coaches were supporting teachers to implement classroom practices from programs whose underlying principles and frameworks may have been at odds, creating confusion for teachers by blending practices, strategies, and routines, thereby potentially confounding study findings. In several blocks, there was also some misunderstanding, especially initially, about the various components of RAAD's blended learning model—in particular, the monthly online PLCs.

Reported Sustainability of Reading Apprenticeship Strategies

Teacher survey responses indicating intention to continue to use Reading Apprenticeship strategies support the focus group and survey feedback of teacher satisfaction with the learning practices. As noted in Exhibit 33, 91 percent of teachers surveyed reported that they were likely to continue to use Reading Apprenticeship strategies in the classroom. Furthermore, 90 percent reported some degree of likelihood that Reading Apprenticeship will continue to be implemented at the school level.

Exhibit 33. Feedback on Reading Apprenticeship Implementation



SOURCE: Teacher Survey in spring 2018. (n=70)

7. IMPACT FINDINGS

7.1. Student Literacy

After applying the model described above, we find that Reading Apprenticeship professional development, as implemented in RAAD over the course of 2 years, did not have an impact on student literacy (Exhibit 34). The estimated impacts are small and not significant for both DRP and state ELA tests.

We also analyzed the impact on math achievement, as measured by state math tests. Since we do not expect the implementation of RAAD to affect math instruction, this is a robustness check for our overall design and sample. The estimated impacts in math are more strongly negative than in ELA. This suggests that there may be unobserved differences between treatment and control blocks despite the

randomization. Examples of unobservable differences can be lower support from school leadership for math curriculum and higher disengagement of math teachers.[22]

Exhibit 34. Impact Estimates, Student Literacy

	Year 1					Year 2				
	Adj. Mean					Adj. Mean				
Outcome	T	C	N	p-value	Effect Size	T	C	N	p-value	Effect Size
DRP	57.81	58.40	6,155	0.342	-0.041	58.67	60.11	5,862	0.141	-0.101
ELA	-0.09	-0.09	6,906	0.990	0.001	-0.18	-0.12	6,889	0.300	-0.057
Robustness Check										
Math	-0.12	-0.06	6,757	0.221	-0.064	-0.18	-0.04	6,556	0.048	**-0.132***

NOTE: Results are based on data from all six sites. Analyses were performed at the student level.
SOURCE: IMPAQ International staff calculations.

The high-fidelity subsample results remain insignificant, and the effect sizes are somewhat smaller (Exhibit 35). The high-fidelity subsample is defined as students in schools where at least half of all participating teachers attended sufficient professional development and who took at least two-thirds of their eligible courses from teachers who attended sufficient professional development (as defined in the FOI section).

As we found no impacts on student outcomes on average, we ran additional impact models to investigate whether there were effects for particular subgroups of students. In other words, we investigated whether the impacts on student literacy and achievement varied by fidelity of FOI and by intervention dosage. Among students in treatment schools, students whose teachers attended sufficient professional development (or high-fidelity teachers) had statistically significantly higher DRP scores in both years than students whose teachers did not (p=0.02 in Year 2, p=0.01 in Year 1). However, this was not true for ELA scores. ELA scores were not significantly correlated statistically with FOI. Similarly, we found no statistically significant relationship between student academic achievement and students' treatment dosage, measured as either the number of participating teachers to whom they were exposed or the number of years the students were in the program.

[22] In fact, most of this stems from one district. It is entirely possible that the push for literacy in that district may have negatively affected the overall performance in math.

Exhibit 35. Impact Estimates, Student Literacy—High-Fidelity Sample vs. Control

Outcome	Year 1 Adj. Mean T	Year 1 Adj. Mean C	Year 1 N	Year 1 p-value	Year 1 Effect Size	Year 2 Adj. Mean T	Year 2 Adj. Mean C	Year 2 N	Year 2 p-value	Year 2 Effect Size
DRP	57.93	58.43	5,026	0.495	-0.035	58.54	59.68	4,716	0.334	-0.080
ELA	-0.09	-0.10	5,634	0.816	0.015	-0.16	-0.12	5,655	0.590	-0.034
Robustness Check										
Math	-0.12	-0.05	5,567	0.291	-0.062	-0.13	-0.03	5,454	0.215	-0.097

NOTE: Results are based on data from all six sites. Analyses were performed at the student level. High-fidelity sample is defined as students in schools where at least half of all participating teachers attended sufficient PD and who took at least two-thirds of their eligible courses from teachers who attended sufficient PD.
SOURCE: IMPAQ International staff calculations.

7.2. Teacher Practices

We do find positive impact on certain mediating outcomes in Year 1. While most of these contrasts are not replicated in Year 2 in the full sample, several remain in the high-fidelity sample (based on both teacher and school FOI thresholds).[23] Based on either teacher or student survey responses, we found no significant impact on the variety/breadth of reading material used in instruction, on the integration of content and literacy activities, or on teacher confidence. Exhibit 37 summarize the impact estimates on teaching practices in the full and high-fidelity samples, respectively. Teaching practices were measured through both teacher and student survey responses. Although teachers and students were not asked identical questions, all practices listed in this section had one or more relevant constructs in each survey, as shown in the crosswalk (Exhibit 17).[24]

Our results indicate that, after 1 year of implementation, teachers in treatment schools reported **using fewer traditional practices**, i.e., practices that may be supplemented or replaced by Reading Apprenticeship practices (ES=-0.415, p=0.042). After 2 years of implementation, the estimated impact was further strengthened (ES=-0.471, p=0.020).

Furthermore, we found impacts that are statistically significant or approaching statistical significance on the following practices:

- Modeling of **collaboration** practices in both years (p=0.070 in Year 1; p=0.046 among high-fidelity teachers in Year 2).
- Student use of **reading strategies** (p=0.035 among high-fidelity teachers in Year 2; p=0.051 for Year 1 student survey).
- Teacher use of **differentiated instruction** (p=0.089 among high-fidelity teachers in Year 2).

[23] In Year 1, impact estimates for high-fidelity teachers were similar to estimates in the full sample, in both magnitude and significance.

[24] It is important to note that the magnitude of effect sizes (ES) based on survey responses, though standardized, is difficult to interpret and compare between surveys. We therefore caution against overinterpreting the difference between large and medium effect sizes (based on common nomenclature in Bosco et al. 2015) in the teacher and student surveys. We note, though, that in studies of the more intensive Reading Apprenticeship professional development, the magnitude of effect sizes between intervention and control teachers is greater. This suggests that the intensity of the professional development treatment is related to teacher practice differences.

Outcomes measured in Year 1 also show that RAAD had statistically significant positive effects on students' use of **metacognitive inquiry** strategies (p=0.011 in teacher survey; p=0.077 in student survey). These impacts are not replicated in Year 2, however.

Lastly, students in treatment schools reported more **class time spent reading** (p=0.015) in Year 1, though the impact on the more comprehensive teacher survey construct ("In-class learning structures for frequent reading") was not statistically significant. The Year 2 effect size was much smaller and not statistically significant.

Exhibit 36. Impact Estimates, Teaching Practices—All Teachers

			Year 1 (Teacher n=167; Student n=4983–5257)		Year 2 (Teacher n=164; Student n=5706–6131)	
Construct	Reported by	Actions by	Effect Size	p-value	Effect Size	p-value
Metacognition						
Metacognitive Inquiry	Teacher	Teacher	0.045	0.778	-0.093	0.574
Metacognitive Inquiry	Teacher	Students	0.403*	0.011	0.129	0.414
Metacognitive Inquiry	Students	Teacher	0.074	0.434	-0.037	0.563
Metacognitive Inquiry	Students	Students	0.132^	0.077	0.022	0.742
Social Dimension						
Collaborative Activities	Teacher	Teacher	0.302^	0.070	0.193	0.243
Collaborative Activities	Teacher	Students	0.119	0.460	-0.007	0.971
Collaborative Activities	Students	Teacher & Students	0.071	0.405	-0.045	0.553
Belonging	Students	Teacher & Students	0.034	0.706	-0.088	0.319
Participation	Students	Student	-0.060	0.170	-0.089^	0.085
Cognitive Dimension						
Specific Comprehension Strategies	Teacher	Teacher	0.155	0.302	0.121	0.411
Specific Comprehension Strategies	Teacher	Students	0.230	0.165	0.206	0.219
Global Reading Strategies	Students	Student	0.057	0.370	-0.084	0.133
Problem-solving Strategies	Students	Student	0.002	0.981	-0.093	0.127
Support reading Strategies	Students	Student	0.111^	0.051	-0.080	0.270
Knowledge-Building Dimension						
Content	Teacher	Teacher	0.028	0.869	-0.020	0.904
Integration of Content and Literacy	Students	Student	0.008	0.900	-0.068	0.254
Extensive Reading						
Breadth	Teacher	Teacher	-0.013	0.935	-0.118	0.460
Breadth	Students	Students	-0.027	0.735	-0.016	0.786
Quantity	Teacher	Students	-0.116	0.540	-0.153	0.384
Quantity (Class Time)	Students	Students	0.160*	0.015	-0.013	0.838
Quantity (Pages per Day)	Students	Student	0.011	0.894	0.150	0.159
Engaging All Learners						
Differentiated Instruction	Teacher	Teacher	0.159	0.325	0.236	0.151

Construct	Reported by	Actions by	Year 1 (Teacher n=167; Student n=4983–5257) Effect Size	p-value	Year 2 (Teacher n=164; Student n=5706–6131) Effect Size	p-value
Engaging instruction	Students	Teacher	0.046	0.631	-0.036	0.636
Teacher Confidence	Teacher	Teacher	0.079	0.656	0.197	0.194
Traditional Practices	Teacher	Teacher & Students	-0.415*	0.042	-0.471*	0.020

NOTE: TS—6 sites, SS—5-site sample in Year 1, 6 sites in Year 2. ^ approaching significance, p<0.10, * significant at the 0.05 level, ** significant at the 0.01 level
SOURCE: IMPAQ International staff calculations.

Based on either teacher or student survey responses, we found no significant impact on the variety/breadth of reading material used in instruction, on the integration of content and literacy activities, or on teacher confidence.

Exhibit 37. Impact Estimates, Teaching Practices—High-Fidelity Sample

Construct	Reported by	Actions by	Year 1 (Teacher n=141; Student n=4297–4546) Effect Size	p-value	Year 2 (Teacher n=140; Student n=4206–4416) Effect Size	p-value
Metacognition						
Metacognitive Inquiry	Teacher	Teacher	0.023	0.903	-0.053	0.783
Metacognitive Inquiry	Teacher	Students	0.453*	0.014	0.267	0.141
Metacognitive Inquiry	Students	Teacher	0.097	0.358	-0.040	0.671
Metacognitive Inquiry	Students	Students	0.165*	0.050	0.100	0.291
Social Dimension						
Collaborative Activities	Teacher	Teacher	0.346^	0.074	0.373*	0.046
Collaborative Activities	Teacher	Students	0.157	0.409	0.193	0.326
Collaborative Activities	Students	Teacher & Students	0.092	0.343	0.049	0.656
Belonging	Students	Teacher & Students	0.099	0.350	0.042	0.694
Participation	Students	Student	-0.067	0.186	-0.068	0.249
Cognitive Dimension						
Specific Comprehension Strategies	Teacher	Teacher	0.183	0.297	0.208	0.221
Specific Comprehension Strategies	Teacher	Students	0.279	0.151	0.405*	0.035
Global Reading Strategies	Students	Student	0.102	0.177	-0.076	0.308
Problem-solving Strategies	Students	Student	0.015	0.841	-0.100	0.194
Support reading Strategies	Students	Student	0.143*	0.031	-0.019	0.842
Knowledge-Building Dimension						
Content	Teacher	Teacher	0.066	0.731	0.174	0.346

Construct	Reported by	Actions by	Year 1 (Teacher n=141; Student n=4297–4546) Effect Size	p-value	Year 2 (Teacher n=140; Student n=4206–4416) Effect Size	p-value
Integration of Content and Literacy	Students	Student	0.046	0.480	0.036	0.649
Extensive Reading						
Breadth	Teacher	Teacher	0.011	0.954	-0.048	0.793
Breadth	Students	Students		0.997	0.008	0.933
Quantity	Teacher	Students	-0.116	0.592	-0.180	0.382
Quantity (Class Time)	Students	Students	0.189*	0.013	0.014	0.891
Quantity (Pages per Day)	Students	Student	0.096	0.310	-0.050	0.730
Engaging All Learners						
Differentiated Instruction	Teacher	Teacher	0.157	0.409	0.320^	0.089
Engaging instruction	Students	Teacher	0.110	0.329	-0.005	0.967
Teacher Confidence	Teacher	Teacher	0.077	0.699	0.287	0.105
Traditional Practices	Teacher	Teacher & Students	-0.415^	0.083	-0.411^	0.082

NOTE: TS—6 sites, SS—5-site sample. ^ approaching significance, p<0.10, * significant at the 0.05 level, ** significant at the 0.01 level
SOURCE: IMPAQ International staff calculations.

The differences in treatment effect estimates between full and high-fidelity samples in Year 2 are notable. Simply restricting the sample to original teachers, or original teachers plus early joiners (those who replaced an original teachers in the fall of 2016), does not produce the same results. This is consistent with the logic model, suggesting that FOI does matter when it comes to teaching practices.

7.3. Student Beliefs

We found no significant impact on student attitudes and dispositions, such as reader or student identity, engagement, or growth mindset. This finding is consistent across years and samples (Exhibits 38 and 39).

Exhibit 38. Impact Estimates, Student Behaviors—All Students

Outcome	Year 1 (n: 4,953–5,173) Adj. Mean T	C	p-value	Effect Size	Year 2 (n: 5,662–5,884) Adj. Mean T	C	p-value	Effect Size
Reader Identity	2.54	2.54	0.912	0.007	2.58	2.62	0.385	-0.045
Student Identity	3.71	3.72	0.959	-0.004	3.65	3.70	0.214	-0.059
Effort to Learn	3.11	3.12	0.968	-0.002	3.16	3.21	0.200	-0.067
Growth Mindset	3.83	3.81	0.772	0.019	3.76	3.84	0.310	-0.069

NOTE: Year 1—5-site sample, Year 2—6-site sample. ^ approaching significance, p<0.10, * significant at the 0.05 level, ** significant at the 0.01 level
SOURCE: IMPAQ International staff calculations.

Exhibit 39. Impact Estimates, Student Behaviors—High-Fidelity Sample

Outcome	Year 1 (n: 4,270–4,466) Adj. Mean T	Year 1 Adj. Mean C	Year 1 p-value	Year 1 Effect Size	Year 2 (n: 4,183–4,318) Adj. Mean T	Year 2 Adj. Mean C	Year 2 p-value	Year 2 Effect Size
Reader Identity	2.56	2.54	0.622	0.032	2.58	2.61	0.576	-0.035
Student Identity	3.73	3.72	0.951	0.005	3.67	3.71	0.414	-0.045
Effort to Learn	3.13	3.12	0.784	0.019	3.15	3.20	0.271	-0.066
Growth Mindset	3.84	3.83	0.827	0.015	3.78	3.84	0.487	-0.054

NOTE: Year 1 & 2—5-site High-Fidelity sample. ^ approaching significance, p<0.10, * significant at the 0.05 level, ** significant at the 0.01 level
SOURCE: IMPAQ International staff calculations.

7.4. Subgroups and Other Analyses

We examined the heterogeneity of treatment effects along several parameters, including:

- Site
- Subject (ELA, Social Studies, Science)
- Student subgroups (prior ELA achievement, gender, ethnicity, FRPL, ELL, special education)
- Teacher background (years of experience, education)

We applied two complementary methods to examine heterogeneity: (1) we applied the baseline model (and robustness checks) to relevant subsamples, e.g., students enrolled in a target ELA course or students who receive free/reduced-price lunch (FRPL), as well as, separately, students who do not receive FRPL; and (2) we applied a modified model to the entire sample, adding interactions between treatment status and the relevant parameter, such as FRPL status.[25]

We did not find strong evidence of differential treatment effects on literacy, teaching practices, or student beliefs along any of the parameters cited. It should be noted that the study was not designed to determine statistical significance of reasonably sized effects in any of these subsamples. Furthermore, many characteristics are correlated and are more frequently observed in some blocks than others.

We did find statistically significant differences in treatment effects between sites when analyzing math achievement. Specifically, math test scores were statistically significantly lower in the treatment schools than in the control schools in Block B, where there was a strong push from school management for literacy, possibly shifting overall support away from math curriculum.

8. SUMMARY AND DISCUSSION

8.1. Summary of Evaluation Findings

The project evaluated in this randomized controlled trial was an instance of the Reading Apprenticeship model designed for scale. This study explored the impact of a less time-intensive, cross-disciplinary Reading Apprenticeship model that is widely used. To offer the ongoing learning and support for implementation analogous to more time-intensive face-to-face models, this study also explored a blended

[25] The method is described in Schochet, Puma, and Deke (2014).

learning model offering support for Reading Apprenticeship implementation through varied online formats, local partner engagement, and site-based teacher leadership and school team meetings. The RAAD project served over 2,000 teachers from 570 schools in 6 states (California, Illinois, Michigan, New York, Texas, and Wisconsin) during 2 academic years. Grade 7 or 8 science, social studies, or ELA teachers in 40 middle schools in 4 of those states participated in the random assignment study.

We use an intent-to-treat (ITT) approach to address the primary question regarding the impact of RAAD on student and teacher outcomes. We capture the effects of the intervention as actually delivered and experienced by all participating teachers (including teachers who did not participate fully or dropped out and their students). To describe the potential effect of teachers receiving the "full dose" of professional development, we also estimate the impact of treatment on the treated (TOT) by restricting the treatment sample to schools who meet the high-fidelity criteria.

There were substantial variations in RAAD implementation across the 6 study blocks fueled by teacher turnover and competing priorities, among other factors. Block B was particularly low in implementation, followed by Block F, while blocks E and D implemented RAAD with highest fidelity. Attendance to face-to-face professional development and online PLCs was lowest in Block B, where teachers left the study, were replaced, or were assigned as ineligible in the highest proportions. Blocks also varied in the degree to which components were implemented, with teachers from Block B attending very few PLCs in Year 1 and close to none in Year 2. Furthermore, there is indication that coaches from Block B may have supported multiple or competing initiatives at the same time as the RAAD implementation.

Overall, teachers reported that the face-to-face training sessions were valuable, and they did not encounter any particular challenges with it. Collaboration with peers, learning new strategies, reigniting enthusiasm about Reading Apprenticeship concepts, and getting to see the Reading Apprenticeship strategies modeled by WestEd facilitators were among the benefits from the face-to-face training. Generally, teachers found the online PLC meetings less helpful, and the degree of unfavorable perceptions toward the PLCs increased over time. School team meetings, on the other hand, were reported as most helpful, though teachers also reported that meetings were difficult to schedule and often not supported by administrators. Teachers favorably rated the team meetings across all blocks and reported that the school team meetings were likely to make them feel supported by colleagues, and that they learned by sharing their classroom strategies and challenges with other teachers.

Despite the uneven implementation across participating blocks, we found positive significant effects on teacher practices for teachers participating in RAAD. After 1 year of RAAD implementation, teachers in treatment schools reported using fewer traditional practices, i.e., practices that may be supplemented or replaced by Reading Apprenticeship practices. After 2 years of implementation, the estimated impact was further strengthened. Furthermore, we found impacts that are statistically significant or approaching statistical significance on teacher modeling of collaboration practices in both years. We also found impacts on teacher use of differentiated instruction and student use of reading strategies. We also found that RAAD had statistically significant positive effects on student use of metacognitive inquiry strategies in Year 1, as reported by both students and teachers. Lastly, students in treatment schools reported more class time spent reading in Year 1.

We did not find significant effects of the RAAD professional development on student literacy and achievement over the course of 2 years. In other words, on average, students from treatment schools and students from control schools had very similar levels of literacy and achievement, as measured by the DRP and state standardized ELA tests. We also found no significant impact on student attitudes and dispositions, such as reader or student identity, engagement, or growth mindset. The findings were robust

to different model specifications. We further investigated whether there were significant results among certain subgroups and found no strong evidence of differential treatment effects on literacy, teaching practices, or student beliefs across blocks, subject content, student subgroup, or teacher background.

8.2. Limitations of the Evaluation Study

There are several limitations to take into consideration when interpreting the findings from this study. One challenge common to ITT studies like this one is that replacement teachers are included in the sample, even when they have not fully participated in the intervention, thereby weakening the results. As teachers were leaving the study because they were changing schools or were reassigned to ineligible grades and subjects, we tried to find a replacement to minimize the threat of attrition. However, often replacement teachers did not take make-up training, even though they had the opportunity to do so. Consequently, the Year 2 sample includes several teachers who did not receive the full RAAD program of PD, which would bias impact results downward.

Related to this limitation, the large number of replacement teachers creates somewhat different samples at the end of Year 1 and Year 2, which would reduce the comparability between the program impacts at the end of each school year. In other words, while we have preserved the integrity of the randomized controlled trial and minimized attrition, our Year 1 and Year 2 teacher samples are not strictly comparable.

Finally, the SLI team indicated possible imperfect adherence to the program model stemming from a discrepancy between the actual intervention and the intervention that was intended by the program developers. Imperfect adherence in RAAD may have occurred in a couple of ways: from possible contamination of control schools, and from competing reform efforts in treatment schools. We learned that some Reading Apprenticeship coaches who served both treatment and control schools in one block may have used certain Reading Apprenticeship practices in control schools. We also learned that in another block, other literacy initiatives were implemented simultaneously during the study, despite our strict eligibility requirement before accepting schools into the study. This suggests that the actual intervention was somewhat different from what the study was originally intended to investigate, and we may be underestimating the true program effects. IMPAQ International has not collected evidence to investigate this issue further.

8.3. RA Model Implications Discussion

The RAAD project represents a determined effort by SLI to build self-sustaining supports for implementing Reading Apprenticeship and bringing it to large scale. SLI tested an innovative scale-up model to reach hundreds of schools across states and contexts to support academic literacy instruction. Findings from this study, representing 7% of all schools affected by RAAD, demonstrate the success of the project in offering training and support to teachers to help them change their instructional practices and foster metacognitive inquiry and support comprehension in the content areas. The study also shares lessons learned and highlights the tradeoff between implementation with fidelity and at scale.

This study contributed to the evidence base of previous evaluation studies of Reading Apprenticeship professional development in several ways. We further examined the Reading Apprenticeship logic model and fine-tuned the alignment between program pathways for change and measurement of teacher and student practices. The evaluation of this iteration of Reading Apprenticeship has taken considerable effort to redesign the teacher survey instrument to measure teaching practice outcomes purposefully aligned with the expected student outcomes. This exercise has helped to align the theory of change conceptually and to map the teacher practices and student practices in a logical way. Further research efforts can focus

on enhancing the measurement of "traditional" teacher practices, which are expected to decrease (e.g., show significant negative effects).

To bring Reading Apprenticeship professional development to scale at greater efficiency, in this SEED grant, SLI developed a cross-disciplinary blended-learning model offering support for Reading Apprenticeship implementation through varied online formats, local partner engagement, and site-based teacher leadership and school team meetings. The resulting innovation, RAAD, allowed SLI to test a model of shortened face-to-face components of professional development and further explored the potentials of online technologies for ongoing learning and implementation support. While the intensive face-to-face training was reduced to 5 days and some of the implementation support typically provided to teachers via live meetings was shifted to online PLC, the overall teacher learning spanned 2 years, as had been the model in prior efficacy studies. Furthermore, implementation was broadened to include an increasing number of cross-subject teachers and the professional development training and support were accommodated accordingly (e.g., in-person training was delivered to cross-disciplinary teams and PLCs were conducted in content-specific groups). However, this shorter cross-disciplinary version of Reading Apprenticeship PD did not have an impact on student outcomes.

An implication from this finding is that there is a need to increase the intensity of the Reading Apprenticeship professional development. Yet it is still not clear how to do this best at scale while keeping the set of demands on sites low. This study contributes to the literature on effective teacher professional development and further unpacks the idea of PD intensity. We know from the field that it takes sustained time and resources to make an instructional shift (Gallagher, Arshan, & Woodworth, 2017). Effective PD gives teachers adequate time to learn, practice, implement, and reflect on new strategies that facilitate changes in their practices (Darling-Hammond, Hyler, & Gardner, 2017). In addition, previous Reading Apprenticeship studies have demonstrated that more intensive professional development has strong positive effects on teacher instructional practice and student opportunities to learn (Greenleaf et al., 2011a, 2011b). Possible ways to consider in the future would include raising the dosage of Reading Apprenticeship that teachers receive by increasing the number of hours of school team meetings, the number of days of the face-to-face trainings, and/or the number of meetings during the school year.

Another new feature specific to this Reading Apprenticeship intervention is that it was implemented with greater involvement of local institutional partners. Implementing RAAD by relying heavily on regional partners rather than SLI's trained team of coaches and trainers came with its own challenges and complexities. Individual partners were sometimes curriculum instructors or literacy coaches themselves, which lend them to embrace the Reading Apprenticeship model more easily. However, some of the local partners were unfamiliar with Reading Apprenticeship and were unable to implement the program support as SLI staff would have. Furthermore, while all local partners had existing frameworks in place for supporting reading and literacy, several lacked understanding of the Reading Apprenticeship blended-learning model. Time and additional capacity-building efforts were necessary on behalf of SLI for these regional partners. Finding the optimal level of involvement for local partners without increasing the load on sites remains an open question.

In summary, this study poses several questions that the program developers may want to examine that would shed light on ways to make the model more efficient and scalable. There are several areas where further investigation could help SLI achieve greater impact. These include asking certain questions: What type of supports need to be embedded in the blended professional development model to accomplish the deep changes in instructional practice for cross-disciplinary teachers and improve reading instruction in U.S. middle schools? What is the optimal composition and intensity of face-to-face and online support to enable teachers to implement new pedagogies and improve their practices sufficiently to have an

impact on student learning outcomes at scale? How can they support and leverage external partners to support higher-fidelity enactment of the Reading Apprenticeship framework in classrooms? These questions set up new opportunities for both SLI and the field to learn.

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10. APPENDIX

10.1. Survey Constructs and Reliability Coefficients

This section describes the teacher and student mediating outcomes measured using data from the teacher and student surveys. Constructs were developed based on the hypothesized changes in teacher practices and teaching efficacy. We then present the reliability coefficients for all constructs computed for each survey administration.

Teacher Mediating Outcomes

a. Teachers provide reading opportunities that reflect breadth in genres/text type.
   - Teachers assign a wide range of instructional genres/text types serving a variety of purposes (five or more, e.g., primary source documents, newspaper, magazine articles, archival footage, slides).
   - Teachers provide supplementary materials to engage students in reading about subject-area topics, build on student knowledge and experiences, and add contrasting perspectives or ideas.

b. Teachers provide in-class learning structures for frequent reading and assign large volumes of text.
   - *Learning structure:* Teacher provides frequent opportunities for in-class reading.
   - *Frequency:* Reading is assigned with the understanding that students are to read in every or nearly every lesson.
   - *Volume:* Teacher assigns large volumes of text from a textbook, articles, and other supplementary texts.

c. Teachers provide ongoing support of student effort for reading and comprehending disciplinary text.

d. Teacher support helps students become active agents in the process of reading and learning. Over time, students are expected and are able to read and comprehend more text, with less support from their teacher during class time. Teachers promote and facilitate student problem solving and meaning making by:
   - Providing guided practice and independent practice opportunities for using reading comprehension strategies, disciplinary thinking, and problem solving; and
   - Holding students accountable for understanding reading assignments. Students cannot meet class expectations without reading (e.g., some important content is not presented verbally—it is only gained through student reading and comprehending).

e. Teachers foster metacognitive inquiry into reading and thinking processes by:
   - Teaching, modeling, and providing opportunities for students to practice metacognitive processes, routines, tools, and strategies.
   - Engaging students in frequent metacognitive conversations about reading and thinking processes, e.g., by having conversations about the thinking processes students and teachers engage in as they read (such as noticing and sharing difficulties/confusion in reading and problem solving) and think-alouds (verbally describing one's thoughts while reading and making thinking visible). In metacognitive conversations, students actively discuss and inquire into:
     - text meaning;
     - their own reading processes and those of others;

- utility of particular reading strategies; and
- their preferences, strengths, and weaknesses as readers.

- Holding students accountable for and assessing metacognition (e.g., through collecting thinking logs or annotations, or assessing student talk)

f. Teachers provide explicit instruction and modeling of reading comprehension routines, tools, strategies, and processes including (but not limited to):
   - How to set a reading purpose
   - How to break apart and make sense of complex sentences in reading materials
   - How to clarify the meaning of subject area materials
   - How to ask and answer questions while reading
   - How to use context to define unfamiliar vocabulary in course materials

g. Teachers foster and support collaboration.
   - Teachers create and foster a collaborative environment where all members of the classroom collaborate in comprehension by sharing their knowledge, experience, and questions.
   - Class members draw on each other's knowledge, serving as resources to make sense of text together.
   - Students participate in discussions in thoughtful and respectful ways.
   - Student grouping arrangements vary to support collaboration and may include pairs, small groups, and whole-class discussions.

h. Teachers employ instruction that promotes equity.
   Teachers employ student-centric and inquiry-based instructional practices that promote equity in learning. Practices include:
   - Providing a variety of subject area reading materials based on student reading levels
   - Reading assigned materials ahead of time to identify potential challenges and learning opportunities
   - Modifying instruction based on assessment of student comprehension of reading materials (e.g., adding or reducing support)
   - Providing extra support for struggling readers
   - Allowing students to work at their own pace

Exhibit 40 shows the constructs that were developed based on the teacher mediating outcomes and the reliabilities of the teacher constructs for each survey administration.

Exhibit 40. Reliability Coefficients by Teacher Survey

Construct Name	TS1	TS2	TS3	TS4	TS5
Extensive Reading					
1.1 Reading Opportunities: Texts	0.86	0.91	0.90	0.86	0.92
1.2 Reading Opportunities: Learning Structure	0.64	0.75	0.79	0.71	0.74
Knowledge-Building Dimension					
2.1 Content	0.75	0.75	0.77	0.75	0.73
Social Dimension					
3.1 Collaborative Activities: Teacher Modeling	0.87	0.87	0.89	0.87	0.88
3.2 Collaborative Activities: Student Practice	0.85	0.85	0.90	0.86	0.90
Metacognitive Inquiry					

Construct Name	TS1	TS2	TS3	TS4	TS5
4.1 Metacognitive Inquiry: Teacher Modeling	0.88	0.90	0.90	0.90	0.92
4.2 Metacognitive Inquiry: Student Practice	0.92	0.92	0.93	0.90	0.92
Cognitive Dimension					
5.1 Specific Comprehension Strategies: Teacher Modeling	0.95	0.96	0.96	0.95	0.95
5.2 Specific Comprehension Strategies: Student Practice	0.91	0.91	0.93	0.91	0.89
Engaging All Learners					
6.1 Negotiating Success: Instruction and Assessment	0.86	0.87	0.88	0.86	0.86
Teacher Confidence					
7.1 Reading Apprenticeship Practices: Teacher Confidence	0.92	0.94	0.94	0.92	0.94
Traditional Practices					
8.1 Traditional Practices	0.69	0.74	0.79	0.76	0.77

SOURCE: IMPAQ staff calculations.

Student Mediating Outcomes

The following student mediating outcomes were measured through the student survey:

a. **Increased collaboration in a community of readers and writers.** Students in RAAD classrooms more frequently contribute to and participate in class discussions; collaborate effectively and respectfully with peers; and draw on each other's knowledge, serving as resources to make sense of text together.

b. **Increased use of comprehension strategies.** Students in RAAD classrooms more frequently use comprehension strategies, including those listed under teacher outcomes. Their use of comprehension strategies increases over time, and students select different strategies depending on the type of text and areas of difficulty.

c. **Increased metacognitive inquiry.** Students in RAAD classrooms more frequently actively discuss and inquire into text meaning; their own reading processes and those of others; the utility of particular reading strategies; and their preferences, strengths, and weaknesses as readers. The frequency with which students engage in these conversations increases over time.

d. **Improved reader identity.** Students become more aware of themselves as readers. Students are more aware of their reading processes, habits, strengths, weaknesses, attitudes, and preferences in reading.

e. **Improved student identity.** Students in RAAD classes have more positive perceptions of themselves as students. They are more serious about school, think about their future educational goals, have more confidence in their reading and abilities, and have improved academic self-concept (e.g., they think of themselves as capable students).

f. **Increased reading of a variety of texts.** Students in RAAD classes increase their engagement in reading a variety of texts, including academically challenging course materials. Students read more text in class, read a wider variety of text (including graphs, illustrations, diagrams, primary sources, etc.), and spend more class time engaged in text-based discussions.

g. **Increased student engagement** in school and in course work, including improved attendance, and increased effort to learn and completion of assignments. Students in RAAD classes report experiencing engaging instructional practices that make learning enjoyable and interesting.

h. **Growth mindset.** Students in RAAD classes report a growth mindset, seeing intelligence as something that grows like a muscle (as opposed to a fixed mindset, where intelligence is something you are born with and can't change).

Exhibit 41 shows the constructs developed based on the student mediating outcomes and the reliabilities of each student construct for each survey administration.

Exhibit 41. Student Survey Construct Reliabilities by Survey

Construct Name	SS1	SS2
Collaboration in a Community of Readers and Writers		
1.1 Participation/contribution to class discussions	0.77	0.76
1.2 Collaborate effectively/respectfully with peers	0.79	0.75
1.3 Belonging	0.80	0.81
Use of Comprehension Strategies		
2.1 Use of global reading strategies	0.87	0.87
2.2 Use of problem-solving strategies	0.82	0.82
2.3 Support reading strategies	0.84	0.85
2.4 Integration of content and literacy activity	0.89	0.86
Metacognitive Inquiry		
3.1 Metacognitive inquiry	0.88	0.87
Reader and Student Identity		
4.1 Student identity	0.90	0.91
4.2 Reader identity	0.90	0.91
Reading of a Variety of Texts		
5.1 Class time spent reading**		
5.2 Variety of reading material	0.77	0.74
5.3 Pages of reading per day	0.71	0.71
Engagement in School and in Course Work		
6.1 Effort to learn	0.88	0.89
6.2 Engaging instruction	0.93	0.92
Growth Mindset		
7.1 Growth mindset	0.89	0.90
Modified Construct Measures		
4.1 Student identity*		0.93
4.2 Reader identity*		0.91
6.1 Effort to learn*		0.81
6.2 Engaging instruction*		0.87

* Since one site administered paper surveys during Year 2 and only certain scales were asked in both online and paper modes, we show the reliabilities for those construct questions that were asked across both modes.
** This construct only contains one single question. No reliability is computed.
SOURCE: IMPAQ staff calculations.

10.2. Student Response Rates and Attrition

School Sample Attrition

There was zero cluster-level attrition in Year 1. One control school in Year 2 dropped out because they did not complete the DRP assessment.

Exhibit 42. Student Samples at the End of Each Study Year, Full Sample

Random Assignment of Schools: 40 Schools	Reading Apprenticeship Treatment: 19 Schools		Instruction as Usual Control: 21 Schools	
Eligible School Sample	YEAR 1 N=19 schools n=3,527 students	YEAR 2 N=19 schools n=3,514 students	YEAR 1 N=21 schools n=3,973 students	YEAR 2 N=21 schools n=3,775 students
Analytic Sample for DRP Scores	N=19 schools n=2,913 students *No test scores: n=614 students*	N=19 schools n=2,918 students *No test scores: n=596 students*	N=21 schools n=3,242 students *No test scores: n=731 students*	N=20 schools n=2,944 students *No test scores: N=1 school n=831 students*

SOURCE: IMPAQ staff calculations.

The next section shows detailed response rates for all student outcomes.

Year 1

Exhibit 43. Student Survey Response Rates by Treatment Status and Block, Year 1

		Student Response Rate					Student-class Response Rate			
	N	Overall	By School			N	Overall	By School Class		
Group	Students	avg	min	max	avg	Observations	avg	min	max	avg
Overall	5,893	78.8%	66.2%	94.0%	78.4%	7,001	75.1%	0.0%	100.0%	74.7%
Control	3,167	77.1%	66.2%	86.6%	76.4%	3,669	74.7%	16.0%	100.0%	74.4%
Treatment	2,726	80.8%	69.2%	94.0%	80.8%	3,332	75.5%	0.0%	100.0%	75.0%
By Block										
A	1,246	83.1%	76.7%	88.0%	83.3%	1,301	81.3%	62.5%	94.7%	81.4%
C	1,669	75.7%	66.2%	85.5%	75.8%	2,123	70.9%	41.4%	95.7%	70.9%
D	1,294	85.5%	80.6%	94.0%	85.1%	1,549	84.2%	54.5%	100.0%	84.2%
E	1,157	71.0%	66.2%	75.0%	70.5%	1,248	68.1%	0.0%	95.0%	67.9%
F	527	79.5%	71.7%	86.6%	78.6%	780	69.4%	9.4%	100.0%	69.7%

SOURCE: IMPAQ staff calculations.

Exhibit 44. DRP Assessment Response Rates by Treatment Status and Block, Year 1

District-School	N Students	Student Response Rate			
		Overall	By School		
		avg	min	max	avg
Overall	7,500	82.1%	32.0%	97.1%	81.6%
Control	3,973	81.6%	32.0%	95.1%	80.3%
Treatment	3,527	82.6%	52.2%	97.1%	83.0%
By Block					
A	1,246	84.9%	79.9%	90.0%	84.7%
B	1,607	85.7%	32.0%	97.1%	85.2%
C	1,669	79.4%	76.1%	84.9%	79.5%
D	1,294	85.1%	71.5%	95.8%	84.4%
E	1,157	77.5%	74.1%	87.1%	77.7%
F	527	75.3%	52.2%	85.0%	74.1%

SOURCE: IMPAQ staff calculations.

Exhibit 45. Student State ELA Assessment Response Rates by Treatment Status and Block, Year 1

Group	N Students	Student Response Rate			
		Overall	By School		
		avg	min	max	avg
Overall	7,500	92.1%	78.5%	98.5%	91.3%
Control	3,973	91.4%	78.5%	98.5%	90.5%
Treatment	3,527	92.8%	84.3%	98.1%	92.2%
By Block					
A	1,246	96.7%	95.0%	98.1%	96.8%
B	1,607	94.2%	78.7%	97.9%	92.9%
C	1,669	83.4%	78.5%	86.9%	83.5%
D	1,294	95.1%	86.9%	96.9%	93.9%
E	1,157	94.9%	92.3%	98.5%	94.9%
F	527	88.8%	80.5%	95.3%	88.6%

SOURCE: IMPAQ staff calculations.

Year 2

Exhibit 46. Student Survey Response Rates by Treatment Status and Block, Year 2

Group	N Students	Student Response Rate				N Observations	Student-class Response Rate			
		Overall	By School				Overall	By School Class		
		avg	min	max	avg		avg	min	max	avg
Overall	7,289	76.9%	33.9%	96.9%	75.7%	8,266	74.2%	0.0%	100.0%	74.1%
Control	3,775	78.4%	51.1%	89.1%	76.5%	4,221	75.8%	6.3%	100.0%	75.4%
Treatment	3,514	75.4%	33.9%	96.9%	74.8%	4,045	72.5%	0.0%	100.0%	72.7%
By Block										
A	1,192	82.6%	78.4%	85.1%	82.4%	1,256	81.3%	58.8%	100.0%	81.3%
B	1,719	70.4%	40.9%	83.7%	70.4%	1,749	70.7%	2.9%	96.8%	69.9%
C	1,487	79.4%	70.9%	88.3%	79.6%	1,912	74.1%	30.0%	100.0%	74.2%
D	563	64.7%	33.9%	81.7%	64.2%	625	63.5%	0.0%	89.3%	63.9%
E	1,118	78.7%	72.7%	82.7%	78.6%	1,277	73.0%	42.3%	93.8%	72.9%
F	1,210	81.7%	75.8%	96.9%	83.6%	1,447	78.1%	0.0%	100.0%	78.6%

SOURCE: IMPAQ staff calculations, Student Survey.

Exhibit 47. DRP Assessment Response Rates by Treatment Status and Block, Year 2

Group	N Students	Student Response Rate			
		Overall	By School		
		avg	min	max	avg
Overall	7,289	80.4%	0.0%	96.5%	78.3%
Control	3,775	78.0%	0.0%	92.0%	75.4%
Treatment	3,514	83.0%	34.7%	96.5%	81.5%
By Block					
A	1,192	86.7%	81.7%	91.7%	86.7%
B	1,719	79.0%	0.0%	96.5%	76.8%
C	1,487	79.6%	62.5%	90.5%	79.8%
D	563	69.6%	34.7%	84.3%	69.5%
E	1,118	81.3%	77.7%	86.1%	81.8%
F	1,210	81.5%	38.9%	92.0%	78.0%

SOURCE: IMPAQ staff calculations, DRP.

Exhibit 48. Student State ELA Assessment Response Rates by Treatment Status and Block, Year 2

Group	N Students	Student Response Rate			
		Overall	By School		
		avg	min	max	avg
Overall	7,289	94.5%	60.7%	99.2%	93.0%
Control	3,775	93.8%	60.7%	99.2%	91.7%
Treatment	3,514	95.3%	88.2%	99.0%	94.5%
By Block					
A	1,192	95.6%	92.4%	97.4%	95.4%
B	1,719	91.1%	60.7%	98.2%	89.1%
C	1,487	97.6%	94.9%	99.1%	97.4%
D	1,210	94.0%	88.2%	99.2%	92.6%
E	1,118	97.2%	95.8%	99.0%	97.4%
F	563	90.4%	80.7%	94.6%	89.8%

SOURCE: IMPAQ staff calculations.

10.3. Correlations between Student Outcomes and Pretests

The overall DRP student scale score is strongly correlated with state ELA test scores from the study year and previous school years. This is shown in Exhibits 49 and 50.

Exhibit 49. Correlations between Student Assessments, Year 1 Student Sample

	DRP	2016–17 State Reading	2016–17 State Math	2015–16 State Reading	2015–16 State Math
DRP	1.00	0.70	0.60	0.68	0.59
2016–17 State Reading		1.00	0.69	0.82	0.69
2016–17 State Math			1.00	0.67	0.77
2015–16 State Reading				1.00	0.73
2015–16 State Math					1.00

SOURCE: IMPAQ staff calculations.

Exhibit 50. Correlations between Student Assessments, Year 2 Student Sample

	DRP	2017–18 State Reading	2017–18 State Math	2016–17 State Reading	2016–17 State Math	2015–16 State Reading	2015–16 State Math
DRP	1.00	0.69	0.59	0.69	0.60	0.66	0.58
2015–16 State Reading		1.00	0.70	0.80	0.67	0.76	0.66
2015–16 State Math			1.00	0.67	0.74	0.63	0.72
2016–17 State Reading				1.00	0.73	0.80	0.69
2016–17 State Math					1.00	0.70	0.80
2017–18 State Reading						1.00	0.74
2017–18 State Math							1.00

SOURCE: IMPAQ staff calculations.

10.4. Equivalence of Analytic Samples

To examine the baseline equivalence of our analytic samples, we regressed each student and teacher covariate included in the impact analyses on (a) the treatment status (indicator variable that takes the value of 1 for schools that were randomly assigned to receive RAAD intervention and 0 for schools that were not), and (b) on blocking variables. We applied the same two-level random-intercept methodology[26] as was used for impact analysis. We also evaluated the equivalence of school-level variables using ordinary least squares (OLS).[27] All equivalence checks were performed at the level of the underlying impact analysis, i.e., at the student level for all student outcomes and at the teacher level for teacher outcomes; they were performed separately for each analytic sample. All relevant school and individual covariates with standardized difference in the 0.05–0.25SD range (in absolute value) were included in the final impact analysis, as required by the What Works Clearinghouse (WWC) Standards 4.0 (2017).[28] Models with all covariates were also analyzed, as part of robustness checks (see Appendix 10.7).

Equivalence results for student and teacher analytic samples are shown in the following tables. There were no differences in student or teacher characteristics, including student pretests that exceed 0.25SD. Because of the number of student survey and teacher survey outcomes, we present the analytic equivalence in terms of the numeric range of means, differences, and p-values.

At the school level, the standardized difference in the proportion of Asian students is greater than 0.25SD in some samples.[29] However, the difference is small in absolute terms, and standardized differences in the proportions of black, Hispanic/Latino, and white students are all smaller than 0.25SD in all samples.

Student-level variables are reported without imputation. Results are similar for imputed variables, and equivalence is achieved for all imputation indicators. Teacher characteristics were never imputed due to high response rate.

[26] We used the Stata command *mixed*, estimated using residual maximum likelihood.

[27] School and treatment group intercepts cannot be simultaneously estimated when the outcome variable is measured at the school level.

[28] Standardized differences are calculated in accordance with WWC 4.0 standards as Hedges' g for continuous variables and Cox index for binary variables. Due to known biases of logistic regression when analyzing rare events (see, e.g., King & Zeng, 2011), Hedges' g is reported for binary variables with means below 10% in either treatment or control group.

[29] School-level averages do not always match between Exhibit 51 and Exhibit 52 for year 1 and Exhibit 55 and Exhibit 56 for year 2 because they are computed based on the number of teachers in each school in the case of the former and on the number of students in each school in the case of the latter.

Year 1 Analyses Baseline Equivalence

Exhibit 51. Baseline Equivalence for Teacher Survey Analyses, Full Analytic Sample Year 1

	Treatment Group Mean (n=79)	Control Group Mean (n=88)	Standardized Difference	p-value
Teacher-level Variables (2016–17)				
Teaching experience (years)	11.18	12.49	-0.125	0.383
Teaching experience w/in subject	9.19	9.60	-0.050	0.748
Education: more than BA	54.4%	55.7%	-0.031	0.903
Reading/literacy certificate	10.1%	14.8%	-0.260	0.417
Teaching ELA	50.6%	56.8%	-0.150	0.396
Teaching Science	26.6%	28.4%	-0.055	0.734
Teaching Social Studies	40.5%	40.9%	-0.010	0.954
Female	75.9%	75.0%	0.031	0.902
Asian	2.5%	0.0%	0.229	0.313
Black	5.1%	11.4%	-0.206	0.136
Latino	32.9%	25.0%	0.233	0.585
White	54.4%	59.1%	-0.115	0.753
Multiple	5.1%	2.3%	0.146	0.405
Other	0.0%	0.0%	0.000	0.000
Ethnicity missing	0.0%	2.3%	-0.219	0.145
School-Level Variables (2015–16)				
Reading z-score	-0.14	-0.19	0.132	0.558
% Asian	5%	8%	-0.237	0.378
% Black	11%	16%	-0.199	0.353
% Latino	56%	46%	0.173	0.161
% White	26%	29%	0.000	0.997
% FRPL	68%	68%	-0.070	0.704
% ELL	20%	15%	0.222	0.195
% Special education	14%	15%	-0.051	0.706

SOURCE: IMPAQ staff calculations.

Exhibit 52. Baseline Equivalence for Student Survey Analyses, Full Analytic Sample Year 1

	Treatment Group Mean	Control Group Mean	Standardized Difference	p-value	Treatment Group N	Control Group N
Student-Level Variables (2016–17)						
Prior (2015–16) Reading z-score	[-0.11,-0.09]	[-0.12,-0.1]	[0.019,0.028]	[0.798,0.862]	2,237-2,380	2,436-2,568
Prior (2015–16) Math z-score	[-0.09,-0.07]	[-0.11,-0.08]	[0.036,0.042]	[0.701,0.741]	2,177-2,320	2,392-2,522
Asian	[0.07,0.08]	0.08	[-0.002,0.003]	[0.979,1]	2,355-2,511	2,584-2,732
Black	[0.05,0.06]	[0.08,0.09]	[-0.113,-0.103]	[0.246,0.317]	2,355-2,511	2,584-2,732
Latino	[0.52,0.53]	0.46	[0.155,0.169]	[0.66,0.683]	2,355-2,511	2,584-2,732
White	0.33	[0.36,0.37]	[0.098,0.116]	[0.751,0.785]	2,355-2,511	2,584-2,732
Female	[0.47,0.48]	0.47	[0.011,0.026]	[0.588,0.805]	2,357-2,513	2,592-2,740
FRPL Status	0.61	[0.6,0.61]	[0.006,0.019]	[0.954,0.986]	2,357-2,513	2,592-2,740
ELL Status	[0.17,0.18]	0.13	[0.216,0.243]	[0.402,0.449]	2,357-2,513	2,592-2,740
Special education Status	[0.09,0.1]	[0.08,0.09]	[0.035,0.058]	[0.179,0.414]	2,357-2,513	2,592-2,740
Over-age for Grade	0.08	0.08	[-0.015,-0.006]	[0.721,0.87]	2,357-2,513	2,592-2,740
School-Level Variables (2015–16)						
Reading z-score	-0.06	-0.17	[0.247,0.259]	[0.29,0.315]	2,360-2,516	2,593-2,741
Math z-score	[-0.05,-0.04]	[-0.11,-0.1]	[0.15,0.163]	[0.467,0.507]	2,360-2,516	2,593-2,741
% Asian	0.06	0.08	[-0.177,-0.169]	[0.493,0.513]	2,360-2,516	2,593-2,741
% Black	[0.05,0.06]	0.09	[-0.279,-0.271]	[0.173,0.183]	2,360-2,516	2,593-2,741
% Latino	0.52	0.44	[0.106,0.12]	[0.283,0.321]	2,360-2,516	2,593-2,741
% White	[0.33,0.34]	0.37	[-0.004,0.006]	[0.96,0.999]	2,360-2,516	2,593-2,741
% FRPL	0.61	0.61	[-0.055,-0.047]	[0.8,0.828]	2,360-2,516	2,593-2,741
% ELL	[0.19,0.2]	0.15	[0.228,0.242]	[0.128,0.145]	2,360-2,516	2,593-2,741
% Special education	0.11	0.13	[-0.153,-0.144]	[0.234,0.265]	2,360-2,516	2,593-2,741

Note: Samples vary by construct. Numbers in brackets show the range of values across all constructs; single values are shown when min=max. Student survey samples includes 5 out of 6 blocks.
SOURCE: IMPAQ staff calculations.

Exhibit 53. Baseline Equivalence for Student Achievement, Full DRP Analytic Sample Year 1

	Treatment Group Mean (n=2,918)	Control Group Mean (n=2,944)	Standardized Difference	p-value	Total Students
Student-Level Variables (2017–18)					
Prior (2015–16) Reading z-score	-0.06	-0.14	0.070	0.439	5,215
Prior (2015–16) Math z-score	-0.05	-0.10	0.088	0.332	5,241
Prior (2016–17) Reading z-score	-0.04	-0.09	0.055	0.609	5,517
Prior (2016–17) Math z-score	-0.07	-0.11	0.060	0.543	5,447
Asian	7.9%	9.1%	-0.048	0.679	5,806
Black	12.7%	10.6%	0.126	0.640	5,806
Latino	53.5%	46.2%	0.178	0.511	5,806
White	24.2%	31.8%	0.232	0.460	5,806

	Treatment Group Mean (n=2,918)	Control Group Mean (n=2,944)	Standardized Difference	p-value	Total Students
Female	48.7%	48.1%	0.014	0.711	5,812
FRPL Status	57.1%	53.0%	0.101	0.705	5,729
ELL Status	15.1%	12.8%	0.117	0.622	5,842
Special Education Status	11.7%	11.5%	0.012	0.922	5,730
Over-age for Grade	8.4%	9.8%	-0.069	0.178	5,829
School-Level Variables (2015–16)					
Reading z-score	-0.06	-0.14	0.157	0.537	5,862
Math z-score	-0.08	-0.13	0.113	0.620	5,862
% Asian	7.1%	9.7%	-0.320	0.343	5,862
% Black	13.2%	11.4%	0.041	0.861	5,862
% Latino	51.9%	44.3%	0.065	0.584	5,862
% White	25.7%	32.4%	0.010	0.937	5,862
% FRPL	63.4%	65.1%	-0.223	0.271	5,862
% ELL	16.1%	13.6%	0.135	0.342	5,862
% Special Education	14.2%	14.2%	-0.007	0.967	5,862

SOURCE: IMPAQ staff calculations.

Exhibit 54. Baseline Equivalence for Student Achievement, Full State ELA Analytic Sample

	Treatment Group Mean (n=3,274)	Control Group Mean (n=3,632)	Standardized Difference	p-value	Total Students
Student-Level Variables (2016–17)					
Prior (2015–16) Reading z-score	0.17	-0.02	0.134	0.181	6,505
Prior (2015–16) Math z-score	-0.08	-0.20	0.133	0.217	6,454
Asian	7.5%	8.5%	-0.038	0.693	6,888
Black	11.3%	14.1%	-0.158	0.570	6,888
Latino	50.6%	46.5%	0.101	0.717	6,888
White	30.0%	28.0%	0.021	0.948	6,888
Female	48.4%	46.9%	0.037	0.261	6,900
FRPL Status	45.7%	50.1%	-0.105	0.694	6,900
ELL Status	13.8%	13.1%	0.034	0.891	6,900
Special Education Status	8.6%	8.1%	0.041	0.201	6,900
Over-age for Grade	9.4%	11.1%	-0.056	0.275	6,895
School-Level Variables (2015–16)					
Reading z-score	-0.04	-0.15	0.254	0.292	6,906
Math z-score	-0.07	-0.14	0.179	0.419	6,906
% Asian	7%	9%	-0.191	0.488	6,906
% Black	11%	14%	-0.190	0.392	6,906
% Latino	50%	45%	0.129	0.314	6,906
% White	29%	30%	0.030	0.789	6,906
% FRPL	62%	66%	-0.178	0.374	6,906
% ELL	16%	14%	0.123	0.389	6,906
% Special Education	14%	14%	-0.040	0.767	6,906

SOURCE: IMPAQ staff calculations.

Year 2 Analyses Baseline Equivalence

Exhibit 55. Baseline Equivalence for Teacher Survey Analyses, Full Analytic Sample Year 2

	Treatment Group Mean (n=75)	Control Group Mean (n=89)	Standardized Difference	p-value
Teacher-level Variables (2017–18)				
Teaching experience (years)	11.53	11.67	0.032	0.827
Teaching experience w/in subject	9.88	8.94	0.180	0.265
Education: more than BA	51.4%	55.1%	-0.090	0.712
Reading/literacy certificate	14.9%	15.7%	-0.016	0.906
Teaching ELA	49.3%	57.3%	-0.194	0.250
Teaching Science	24.0%	23.6%	0.013	0.937
Teaching Social Studies	33.3%	28.1%	0.149	0.508
Female	70.3%	75.3%	-0.153	0.488
Asian	0.0%	0.0%	0.000	N/A
Black	6.7%	9.0%	-0.051	0.733
Latino	34.7%	24.7%	0.290	0.498
White	53.3%	59.6%	-0.153	0.689
Multiple	4.0%	4.5%	-0.031	0.849
Other	0.0%	0.0%	0.000	N/A
Ethnicity missing	1.3%	2.2%	-0.067	0.665
School-Level Variables (2015–16)				
Reading z-score	-0.16	-0.19	0.109	0.634
% Asian	5.1%	7.8%	-0.219	0.398
% Black	9.8%	15.3%	-0.234	0.260
% Latino	58.2%	46.7%	0.192	0.091
% White	24.9%	28.2%	-0.010	0.922
% FRPL	68.4%	67.8%	-0.048	0.797
% ELL	20.7%	15.8%	0.203	0.213
% Special Education	13.3%	14.7%	-0.075	0.578

SOURCE: IMPAQ staff calculations.

Exhibit 56. Baseline Equivalence for Student Survey Analyses, Full Analytic Sample Year 2

	Treatment Group Mean	Control Group Mean	Standardized Difference	p-value	Treatment Group N	Control Group N
Student-Level Variables (2016–17)						
Prior (2015–16) Reading z-score	[-0.06,-0.03]	[-0.14,-0.13]	[0.084,0.102]	[0.281,0.36]	2,416-2,649	2,627-2,790
Prior (2015–16) Math z-score	[-0.05,-0.02]	[-0.11,-0.1]	[0.08,0.1]	[0.256,0.353]	2,417-2,653	2,646-2,813
Prior (2016–17) Reading z-score	[-0.03,0]	[-0.09,-0.07]	[0.054,0.068]	[0.517,0.603]	2,540-2,785	2,794-2,970
Prior (2016–17) Math z-score	[-0.07,-0.03]	[-0.11,-0.09]	[0.047,0.068]	[0.457,0.6]	2,457-2,702	2,778-2,960
Asian	0.08	[0.08,0.09]	[-0.028,-0.021]	[0.812,0.86]	2,644-2,901	2,960-3,156
Black	[0.1,0.11]	[0.11,0.12]	[-0.075,-0.042]	[0.79,0.881]	2,644-2,901	2,960-3,156
Latino	[0.52,0.53]	0.48	[0.1,0.117]	[0.691,0.74]	2,644-2,901	2,960-3,156
White	[0.27,0.28]	[0.3,0.31]	[0.074,0.086]	[0.789,0.82]	2,644-2,901	2,960-3,156
Female	[0.48,0.49]	[0.47,0.48]	[0.02,0.027]	[0.483,0.603]	2,649-2,907	2,960-3,156
FRPL Status	[0.53,0.54]	[0.52,0.53]	[-0.01,0.009]	[0.967,0.995]	2,610-2,864	2,940-3,141
ELL Status	0.16	0.14	[0.095,0.109]	[0.664,0.705]	2,654-2,918	2,984-3,189
Special Education Status	[0.11,0.12]	[0.1,0.11]	[0.069,0.093]	[0.473,0.598]	2,610-2,864	2,941-3,142
Over-age for Grade	[0.07,0.08]	0.09	[-0.061,-0.047]	[0.148,0.264]	2,640-2,901	2,981-3,184
School-Level Variables (2015–16)						
Reading z-score	[-0.07,-0.06]	-0.15	[0.184,0.194]	[0.452,0.477]	2,666-2,930	2,996-3,201
Math z-score	-0.08	[-0.14,-0.13]	[0.121,0.13]	[0.549,0.578]	2,666-2,930	2,996-3,201
% Asian	0.07	0.09	[-0.238,-0.225]	[0.477,0.497]	2,666-2,930	2,996-3,201
% Black	[0.1,0.11]	[0.12,0.13]	[-0.131,-0.101]	[0.605,0.675]	2,666-2,930	2,996-3,201
% Latino	[0.51,0.52]	0.46	[0.095,0.109]	[0.572,0.609]	2,666-2,930	2,996-3,201
% White	0.29	[0.3,0.31]	[0.022,0.026]	[0.818,0.849]	2,666-2,930	2,996-3,201
% FRPL	[0.62,0.63]	0.66	[-0.174,-0.161]	[0.394,0.426]	2,666-2,930	2,996-3,201
% ELL	0.17	[0.14,0.15]	[0.144,0.161]	[0.503,0.553]	2,666-2,930	2,996-3,201
% Special Education	[0.13,0.14]	0.14	[-0.042,-0.033]	[0.866,0.894]	2,666-2,930	2,996-3,201

NOTE: Samples vary by construct. Numbers in brackets show the range of values across all constructs; single values are shown when min=max.
SOURCE: IMPAQ staff calculations.

Exhibit 57. Baseline Equivalence for Student Achievement, Full DRP Analytic Sample Year 2

	Treatment Group Mean (n=2,918)	Control Group Mean (n=2,944)	Standardized Difference	p-value	Total Students
Student-Level Variables (2017–18)					
Prior (2015–16) Reading z-score	-0.06	-0.14	0.070	0.439	5,215
Prior (2015–16) Math z-score	-0.05	-0.10	0.088	0.332	5,241
Prior (2016–17) Reading z-score	-0.04	-0.09	0.055	0.609	5,517
Prior (2016–17) Math z-score	-0.07	-0.11	0.060	0.543	5,447
Asian	7.9%	9.1%	-0.048	0.679	5,806
Black	12.7%	10.6%	0.126	0.640	5,806
Latino	53.5%	46.2%	0.178	0.511	5,806
White	24.2%	31.8%	0.232	0.460	5,806
Female	48.7%	48.1%	0.014	0.711	5,812
FRPL Status	57.1%	53.0%	0.101	0.705	5,729
ELL Status	15.1%	12.8%	0.117	0.622	5,842
Special Education Status	11.7%	11.5%	0.012	0.922	5,730
Over-age for Grade	8.4%	9.8%	-0.069	0.178	5,829
School-Level Variables (2015–16)					
Reading z-score	-0.06	-0.14	0.157	0.537	5,862
Math z-score	-0.08	-0.13	0.113	0.620	5,862
% Asian	7.1%	9.7%	-0.320	0.343	5,862
% Black	13.2%	11.4%	0.041	0.861	5,862
% Latino	51.9%	44.3%	0.065	0.584	5,862
% White	25.7%	32.4%	0.010	0.937	5,862
% FRPL	63.4%	65.1%	-0.223	0.271	5,862
% ELL	16.1%	13.6%	0.135	0.342	5,862
% Special Education	14.2%	14.2%	-0.007	0.967	5,862

SOURCE: IMPAQ staff calculations.

Exhibit 58. Baseline Equivalence for Student Achievement, Full State ELA Sample Year 2

	Treatment Group Mean (n=2,918)	Control Group Mean (n=2,944)	Standardized Difference	p-value	Total Students
Student-Level Variables (2017–18)					
Prior (2015–16) Reading z-score	-0.06	-0.14	0.070	0.439	5,215
Prior (2015–16) Math z-score	-0.05	-0.10	0.088	0.332	5,241
Prior (2016–17) Reading z-score	-0.04	-0.09	0.055	0.609	5,517
Prior (2016–17) Math z-score	-0.07	-0.11	0.060	0.543	5,447
Asian	7.9%	9.1%	-0.048	0.679	5,806
Black	12.7%	10.6%	0.126	0.640	5,806
Latino	53.5%	46.2%	0.178	0.511	5,806
White	24.2%	31.8%	0.232	0.460	5,806
Female	48.7%	48.1%	0.014	0.711	5,812
FRPL Status	57.1%	53.0%	0.101	0.705	5,729
ELL Status	15.1%	12.8%	0.117	0.622	5,842
Special Education Status	11.7%	11.5%	0.012	0.922	5,730
Over-age for Grade	8.4%	9.8%	-0.069	0.178	5,829
School-Level Variables (2015–16)					

	Treatment Group Mean (n=2,918)	Control Group Mean (n=2,944)	Standardized Difference	p-value	Total Students
Reading z-score	-0.06	-0.14	0.157	0.537	5,862
Math z-score	-0.08	-0.13	0.113	0.620	5,862
% Asian	7.1%	9.7%	-0.320	0.343	5,862
% Black	13.2%	11.4%	0.041	0.861	5,862
% Latino	51.9%	44.3%	0.065	0.584	5,862
% White	25.7%	32.4%	0.010	0.937	5,862
% FRPL	63.4%	65.1%	-0.223	0.271	5,862
% ELL	16.1%	13.6%	0.135	0.342	5,862
% Special Education	14.2%	14.2%	-0.007	0.967	5,862

SOURCE: IMPAQ staff calculations.

10.5. Impact Model

The primary analysis of the intervention on student academic outcomes uses a multilevel model, whereby student achievement (measured by DRP or standardized state assessments) is regressed on students' baseline English and math standardized scores, student demographics, school characteristics, school random effects, and block fixed effects.

Level 1: (student level)

$$y_{ij} = \beta_{0j} + \sum_{m=1}^{M} \beta_{mj} \, COV_{ij} + e_{ij} \qquad (1)$$

In this equation, y_{ij} is the outcome for student *i* in school *j*, COV_{ij} is a vector of *M* student-level covariates, and e_{ij} is the random effect associated with student *i* in school *j*, conditioning on the other effects in the model. Student-level covariates include prior academic achievement, as measured by standardized test scores in ELA and math;[30] gender; age (as an over-age indicator); ethnicity;[31] free or reduced price lunch status; ELL status; and special education status. In addition, controls include grade and subject fixed effects[32] and, in the case of DRP, test form and whether the test was submitted by the student.[33] The covariates were selected through a formal covariate selection process, based on practice guides, equivalence, multicollinearity, and information criteria.[34]

[30] Prior test scores are interacted with grade fixed effect. Students in grades 7 and 8 are pooled together. When analyzing the impact on state ELA scores, we use a cubic polynomial of the baseline scores, interacted with grade fixed effects.

[31] Indicators for black and Hispanic/Latino categories.

[32] Subject fixed effects are set to 1 if a student took any regular course in English, science, or social studies from a participating teacher during the school year.

[33] Tests where a student answered questions but did not click the "submit" button were manually submitted and then scored by the test vendor.

[34] We used backward variable elimination based on the Akaike information criterion (AIC).

Level 2: (school level)

$$\beta_{0j} = \gamma_{00} + \gamma_{01} T_j + \sum_{r=2}^{R} \gamma_{0r}\, COV_j + \sum_{s=R+1}^{S} \gamma_{0s}\, I_j + u_j$$

$$\beta_{mj} = \gamma_{m0} \qquad (2)$$

T_j is the treatment indicator showing whether a school is assigned to RAAD or control status. COV_j is a vector of *R* school-level covariates: school-level demographics (proportion non-white, female, ELL, FRPL, and special education[35]), and the number of students in grade 8 and its square. I_j indicates the block to which a school belongs and takes on a value of zero or one. The effect γ_{0s} represents the average difference in outcome between block *s* and the other blocks, controlling for the other effects in the model. $u_j$is the random effect of school *j*, conditioning on the other effects in the model. The goal of the impact analyses for students is to estimate γ_{01}.

The impact on teaching practices and student behaviors/beliefs is analyzed in a similar fashion. Teacher characteristics retained following the covariate selection process are limited to subjects and grade (7 vs. 8) taught.[36] School covariates in the analyses of teaching practices include school-level ELA and math pretest standardized scores (averaged across grades 7 and 8) and detailed school ethnic composition (proportions of Asian, black, Hispanic/Latino, and other students).

Missing covariates data are handled through simple imputation: replacing all missing values with the same value (e.g., zero) and including missing value indicator variables. Complete case analyses were performed as robustness checks. Missing outcome data are not imputed.

All models are estimated via Restricted Maximum Likelihood estimation. Robustness checks include Full Maximum Likelihood and OLS with cluster-robust standard errors (clustered at the school level), as well models with alternative sets of covariates, ranging from blocking variable only to all available covariates.

10.6. Impact Evaluation Robustness Checks

The benchmark impact models were estimated using mixed-effect estimation (using residual maximum likelihood, REML) and included blocking variables, student or teacher characteristics, and school characteristics. The models are described in detail in section 10.5. We next present results of selected robustness checks (alternative covariates, sample definitions, and estimation methods) for the student academic outcomes.[37] Results are generally consistent across alternative specifications.

Model 1 is the benchmark model, shown here for comparison. Model 2 includes only the blocking variables. Model 3 includes all covariates included in the benchmark model, as well as all other available student and school characteristics. Model 4 is equivalent to the benchmark model but without imputation of missing data (and with listwise deletion of observations).

[35] In the DRP model only, as determined by the covariate selection process.

[36] Teachers' education level, years of experience, gender, and ethnicity were considered but not retained in the preferred model.

[37] Robustness checks for survey outcomes were also performed but are not shown due to the total number of constructs. Survey results are also generally consistent.

Models 5 and 6 use two common alternative estimation methods for the benchmark model: Model 5 is estimated using the Swamy and Arora (1972) feasible generalized least squares (GLS) method; Model 6 is estimated using OLS with robust standard errors clustered at the school level.

Unlike the benchmark maximum likelihood mixed-effect method, GLS and OLS do not depend on iterative derivation of residuals and make no explicit assumptions about the distribution of between-cluster variation in outcomes. In large samples, mixed-effect methods can produce gains in efficiency if the distribution of the errors is correctly specified (Cameron and Miller, 2010). Both approaches, however, are susceptible to small sample bias, i.e., when there are few (generally, fewer than 50) clusters (Cameron and Miller, 2015). In practice, which method is more conservative may not be known a priori, although multiple studies have found mixed-effect methods to produce more conservative estimates of standard errors than cluster-robust OLS (Yasuyo and Gee, 2014).

Lastly, Models 7 through 23 show benchmark impact model results for various subgroup specifications.

Exhibit 59. Alternative Impact Estimates for DRP Full Sample, Year 1

Model	Impact Coeff.	(S.E.)	Effect Size	p-value	N
1. Benchmark Model	-0.592	(0.623)	-0.041	0.342	6,155
Alternate Covariate Specifications					
2. Unadjusted (no covariates except block fixed effects)	-0.257	(1.482)	-0.018	0.863	5,026
3. All covariates (Benchmark plus additional student and school level demographic variables)	-0.507	(0.654)	-0.035	0.438	6,155
4. Listwise deletion for missing covariates	-0.560	(0.632)	-0.039	0.376	5,674
Alternative Estimation Methods					
5. GLS	-0.574	(0.663)	-0.040	0.386	6,155
6. OLS with cluster robust SEs	-0.960	(0.516)	-0.067^	0.070	6,155
Alternative Samples					
7. In ELA Class	-0.287	(0.663)	-0.020	0.664	4,582
8. In Social Studies Class	-0.136	(1.039)	-0.009	0.896	3,734
9. In Science Class	-0.698	(0.898)	-0.050	0.437	3,005
10. Female	-0.763	(0.592)	-0.056	0.197	2,918
11. Male	-0.563	(0.785)	-0.038	0.473	3,230
12. ELL	0.061	(0.892)	0.007	0.945	796
13. Non-ELL	-1.009	(0.619)	-0.071	0.103	5,352
14. FRPL	-0.937	(0.790)	-0.072	0.235	2,894
15. Non-FRPL	-0.956	(0.706)	-0.068	0.176	3,254
16. Low student attendance rate	-0.550	(0.635)	-0.038	0.386	5,949
17. High student attendance rate	-0.502	(0.628)	-0.035	0.424	5,888
18. White	-1.234	(0.859)	-0.085	0.151	1,752
19. Non-White	-0.550	(0.668)	-0.040	0.411	4,389
20. Low pre-test scale score (small sample)	0.731	(1.019)	0.090	0.473	339
21. High pre-test scale score (small sample)	-0.493	(3.685)	-0.040	0.894	165

NOTE: * significant at 5 percent, ** significant at 1 percent.
SOURCE: IMPAQ staff calculations.

Exhibit 60. Alternative Impact Estimates for DRP Full Sample, Year 2

Model	Impact Coeff.	(S.E.)	Effect Size	p-value	N
1. Benchmark Model	-1.443	(0.980)	-0.101	0.141	5,862
Alternate Covariate Specifications					
2. Unadjusted (no covariates except block fixed effects)	-0.656	(1.691)	-0.046	0.698	4,716
3. All covariates (Benchmark plus additional student and school level demographic variables)	-1.167	(1.028)	-0.081	0.256	5,862
4. Listwise deletion for missing covariates	-1.735	(0.988)	-0.122^	0.079	5,079
Alternative Estimation Methods					
5. GLS	-1.325	(0.310)	-0.092**	0.000	5,862
6. OLS with cluster robust SEs	-1.325	(0.668)	-0.092^	0.055	5,862
Alternative Samples					
7. In ELA Class	-1.088	(1.138)	-0.076	0.339	4,417
8. In Social Studies Class	-0.593	(1.184)	-0.041	0.617	4,003
9. In Science Class	-2.904	(1.453)	-0.211*	0.046	2,798
10. Female	-1.525	(1.116)	-0.112	0.172	2,815
11. Male	-1.259	(0.872)	-0.085	0.149	2,997
12. ELL	-0.712	(0.887)	-0.083	0.422	812
13. Non-ELL	-1.669	(1.038)	-0.118	0.108	5,030
14. FRPL	-1.089	(0.974)	-0.080	0.263	3,151
15. Non-FRPL	-1.133	(1.402)	-0.077	0.419	2,578
16. Low student attendance rate	-1.454	(0.980)	-0.101	0.138	5,823
17. High student attendance rate	-1.434	(0.982)	-0.100	0.144	5,640
18. White	-1.289	(1.779)	-0.087	0.469	1,626
19. Non-White	-1.161	(0.763)	-0.084	0.128	4,180
20. Low pre-test scale score (small sample)	0.452	(1.207)	0.055	0.708	261
21. High pre-test scale score (small sample)	-3.423	(4.138)	-0.292	0.408	154

NOTE: * significant at 5 percent, ** significant at 1 percent.
SOURCE: IMPAQ staff calculations.

Exhibit 61. Alternative Impact Estimates For State ELA Tests Full Sample, Year 1

Model	Impact Coeff.	(S.E.)	Effect Size	p-value	N
1. Benchmark Model	0.001	(0.051)	0.001	0.990	6,906
Alternate Covariate Specifications					
2. Unadjusted (no covariates except block fixed effects)	0.057	(0.100)	0.060	0.572	6,906
3. All covariates (Benchmark plus additional student and school level demographic variables)	-0.024	(0.053)	-0.025	0.647	6,906
4. Listwise deletion for missing covariates	-0.012	(0.047)	-0.013	0.801	6,398
Alternative Estimation Methods					
5. GLS	0.009	(0.014)	0.009	0.544	6,906
6. OLS with cluster robust SEs	0.009	(0.034)	0.009	0.802	6,906
Alternative Samples					
7. In ELA Class	-0.001	(0.049)	-0.001	0.991	5,190
8. In Social Studies Class	0.075	(0.065)	0.077	0.246	4,185
9. In Science Class	-0.034	(0.070)	-0.036	0.628	3,347
10. Female	-0.020	(0.047)	-0.023	0.666	3,285
11. Male	0.018	(0.057)	0.019	0.750	3,615
12. ELL	-0.041	(0.062)	-0.055	0.511	926
13. Non-ELL	-0.025	(0.048)	-0.027	0.603	5,974
14. FRPL	0.001	(0.057)	0.001	0.981	3,312
15. Non-FRPL	-0.009	(0.054)	-0.010	0.865	3,588
16. Low student attendance rate	0.001	(0.051)	0.001	0.985	6,899
17. High student attendance rate	0.003	(0.051)	0.004	0.948	6,803
18. White	0.086	(0.089)	0.093	0.334	1,992
19. Non-White	-0.011	(0.050)	-0.012	0.822	4,896
20. Low pre-test scale score (small sample)	0.041	(0.091)	0.068	0.651	437
21. High pre-test scale score (small sample)	0.333	(0.170)	0.515*	0.050	175

NOTE: * significant at 5 percent, ** significant at 1 percent.
SOURCE: IMPAQ staff calculations.

Exhibit 62. Alternative Impact Estimates for State ELA Tests Full Sample, Year 2

Model	Impact Coeff.	(S.E.)	Effect Size	p-value	N
1. Benchmark Model	-0.062	(0.060)	-0.057	0.300	6,889
Alternate Covariate Specifications					
2. Unadjusted (no covariates except block fixed effects)	0.070	(0.118)	0.063	0.554	5,655
3. All covariates (Benchmark plus additional student and school level demographic variables)	-0.054	(0.065)	-0.049	0.410	6,889
4. Listwise deletion for missing covariates	-0.082	(0.054)	-0.077	0.129	5,953
Alternative Estimation Methods					
5. GLS	-0.058	(0.019)	-0.053**	0.002	6,889
6. OLS with cluster robust SEs	-0.058	(0.047)	-0.053	0.223	6,889
Alternative Samples					
7. In ELA Class	-0.048	(0.059)	-0.044	0.418	5,252
8. In Social Studies Class	-0.045	(0.067)	-0.041	0.498	4,556
9. In Science Class	-0.085	(0.084)	-0.076	0.314	3,327
10. Female	-0.071	(0.071)	-0.065	0.319	3,306
11. Male	-0.048	(0.056)	-0.045	0.389	3,528
12. ELL	-0.107	(0.115)	-0.095	0.352	1,034
13. Non-ELL	-0.060	(0.052)	-0.062	0.248	5,833
14. FRPL	-0.078	(0.061)	-0.074	0.205	3,772
15. Non-FRPL	0.046	(0.084)	0.043	0.587	2,958
16. Low student attendance rate	-0.069	(0.057)	-0.065	0.231	6,818
17. High student attendance rate	-0.074	(0.058)	-0.071	0.202	6,521
18. White	-0.022	(0.062)	-0.024	0.728	1,880
19. Non-White	-0.088	(0.064)	-0.080	0.166	4,948
20. Low pre-test scale score (small sample)	-0.017	(0.152)	-0.017	0.910	352
21. High pre-test scale score (small sample)	0.196	(0.150)	0.323	0.191	164

NOTE: * significant at 5 percent, ** significant at 1 percent.
SOURCE: IMPAQ staff calculations

10.7. Mediator Analysis

School-level Correlations

To test the relationship between our theorized mediating outcomes and the primary outcome of improved student achievement, we performed some basic mediation analyses. These analyses are descriptive in nature, as they do not attempt to control for any student, teacher, or school characteristics. We calculated unadjusted correlations between student test scores (DRP and state assessments) and student and teacher survey constructs. We also calculated unadjusted correlations between student and teacher survey constructs directly. All correlations were calculated at the level of the school (i.e., using school averages for all outcomes), with student-N weighting to account for differences in school samples.

As can be seen in Exhibits 63 and 64, student survey responses on RA teaching practices are weakly correlated with state ELA test scores and student DRP test scores in both years. The relationship between

teaching practices in the teacher survey with state ELA test scores and DRP scores are even weaker. Student beliefs are positively correlated with DRP test scores in both years, with a significant but weak positive relationship in year 2. Between the student and teacher surveys, no construct is strongly correlated or significant. However, the correlation between traditional practices and state ELA test scores is small but negatively significant in both years.

Exhibit 63. School-level Correlations between Student Achievement and Survey Constructs, Year 1

	DRP	Standardized State ELA Score	Student Beliefs	RA Practices (SS)	RA Practices (TS)
Student Beliefs	0.344^	0.114			
RA Practices (SS)	-0.171	-0.334^	0.719**		
RA Practices (TS)	-0.067	0.051	-0.167	0.158	
Traditional Practices	-0.218	-0.318*	-0.131	0.126	0.376*

NOTE: Values represent student-weighted school-level unadjusted Pearson correlations. Weights are set to the number of eligible students with valid DRP scores.
SOURCE: IMPAQ staff calculations.

Exhibit 64. School-level Correlations between Student Achievement and Survey Constructs, Year 2

	DRP	Standardized State ELA Score	Student Beliefs	RA Practices (SS)	RA Practices (TS)
Student Beliefs	0.356*	0.240			
RA Practices (SS)	0.131	-0.046	0.742**		
RA Practices (TS)	-0.073	0.030	0.249	0.301^	
Traditional Practices	-0.351*	-0.416**	0.190	0.306^	0.446**

NOTE: Values represent student-weighted school-level unadjusted Pearson correlations. Weights are set to the number of eligible students with valid DRP scores.
SOURCE: IMPAQ staff calculations.

Student-level Regression Results

We examine whether impacts on classroom instruction (measured by responses to the teacher and student survey questions) mediate impacts on students (measured in terms of student literacy and attitudes), using methods summarized in Schochet, Puma, and Deke (2014). Specifically, we estimate the following models:

(1) $$y_{ij} = \gamma_0 + \gamma_1(T_j) + \gamma_2 Construct_j^m + \sum_{q=1}^{Q} \beta_q X_{qij} + \sum_{s=2}^{S} \gamma_q W_{sj} + u_j + \varepsilon_{ij}$$

(2) $$y_{ij} = \gamma_0 + \gamma_1(T_j) + \gamma_2 Construct_j^m + \gamma_3 T_j Construct_j^m + \sum_{q=1}^{Q} \beta_q X_{qij} + \sum_{s=2}^{S} \gamma_q W_{sj} + u_j + \varepsilon_{ij}$$

where T_j is an indicator variable for treatment and $Construct_j^m$ is the value of construct *m* (*m* = 1, 2, … *M*) for student *j* or student *j*'s teacher. The coefficients of interest are γ_2, which indicates the relationship between student literacy and the survey construct, and γ_3, which indicates the differential relationship in the treatment group.

Below are some notable results from these models:

- Teaching practices as measured by teacher surveys are not correlated with student outcomes overall. However, they are positively and significantly correlated with ELA and math in the treatment group (relative to the control group).
    - When looking at the construct for content and knowledge-building, this construct has a weak but significant negative relationship with the DRP and state math assessment. However, it is significantly correlated with DRP (large, positive) and state assessments (weak but positive) in the treatment group.
    - There are several constructs that have weak significant negative relationships with state math assessments. However, except for one construct, these are positively and significantly correlated with math in the treatment group (relative to the control group).
    - Teaching practices as measured by student surveys are well correlated (positively and significantly) with student outcomes (DRP, ELA, and math) in both treatment and control groups. The relationship (especially with DRP) is stronger in the treatment group for several constructs.
- Student beliefs (as measured by student surveys) are positively and significantly correlated with all student outcomes. Other than one construct that has a positive significant relationship with math assessment, there does not appear to be any differential between treatment and control samples.

Exhibit 65 reports the construct coefficient γ_2 in equation 1, which describes the relationship between student survey constructs and student literacy outcomes. Exhibit 66 reports the construct coefficient γ_2 and the treatment-construct interaction term coefficient γ_3, which presents any differential relationship attributable to the treatment group.

Exhibit 65. Construct Coefficient (γ_2) Describing Relationship between Student Survey Constructs and Student Outcomes, Year 2

	DRP	State ELA	State Math
TEACHING PRACTICES	1.295**	0.123**	0.071**
STUDENT BELIEFS/IDENTITY	2.449**	0.167**	0.145**
Metacognition			
3.1 Metacognitive Inquiry	0.154	0.053**	0.023
Social Dimension			
1.1 Participation/contribution to class discussion	0.983**	0.083**	0.096**
1.2 Collaborate effectively/respectfully with peers	1.235**	0.097**	0.071**
1.3 Belonging	0.763**	0.026*	0.032**
Cognitive Dimension			
2.1 Use of global reading strategies	1.141**	0.089**	0.035**
2.2 Use of problem-solving strategies	1.585**	0.119**	0.053**
2.3 Support reading strategies	-0.327^	0.023^	0.002
Knowledge-Building Dimension			
2.4 Integration of content and literacy activity	1.238**	0.101**	0.065**
Reading			
5.1 Class time spent reading	0.787**	0.031**	0.032**
5.2 Variety of reading material	0.066	0.015	0.015
5.3 Pages of reading per day	-0.063	-0.009	-0.005
Engaging			
6.2 Engaging instruction	0.147	0.028**	0.029**
Behaviors			
4.1 Student identity	1.559**	0.11**	0.105**
4.2 Reader identity	0.881**	0.068**	0.05**
6.1 Effort to learn	1.294**	0.103**	0.093**
7.1 Growth mindset	1.891**	0.099**	0.079**

NOTE: The coefficients here show γ_2 from Equation 1. * significant at the 0.05 level, ** significant at the 0.01 level
SOURCE: IMPAQ staff calculations.

Exhibit 66. Construct Coefficient (γ_2) and Treatment-Construct Interaction Coefficients (γ_3) Describing Relationships between Student Survey Constructs & Student Outcomes, Year 2

	DRP		State ELA		State Math	
	γ_2	γ_3	γ_2	γ_3	γ_2	γ_3
TEACHING PRACTICES	0.917*	0.793	0.123**	0.025	0.071**	0.021
STUDENT BELIEFS/IDENTITY	2.377**	0.155	0.167**	0.022	0.145**	0.027
Metacognition						
3.1 Metacognitive Inquiry	-0.333	1.043*	0.053**	0.034	0.023	0.034
Social Dimension						
1.1 Participation/contribution to class discussion	1.109**	-0.258	0.083**	0.011	0.096**	-0.035
1.2 Collaborate effectively/respectfully with peers	0.541	1.426**	0.097**	0.057^	0.071**	0.055^
1.3 Belonging	0.527*	0.498	0.026*	0.031	0.032**	0.053*
Cognitive Dimension						
2.1 Use of global reading strategies	1.042**	0.209	0.089**	0.003	0.035**	0.007
2.2 Use of problem-solving strategies	1.718**	-0.277	0.119**	-0.005	0.053**	0.006
2.3 Support reading strategies	-0.46^	0.280	0.023^	0.015	0.002	0.015
Knowledge-Building Dimension						
2.4 Integration of content and literacy activity	0.985**	0.550	0.101**	0.022	0.065**	0.014
Reading						
5.1 Class time spent reading	0.479*	0.642*	0.031**	0.006	0.032**	-0.021
5.2 Variety of reading material	-0.338	0.869^	0.015	0.023	0.015	0.037
5.3 Pages of reading per day	-0.296	0.509^	-0.009	0.011	-0.005	0.016
Engaging						
6.2 Engaging instruction	-0.150	0.646*	0.028**	0.021	0.029**	0.019
Behaviors						
4.1 Student identity	1.496**	0.136	0.11**	-0.002	0.105**	0.023
4.2 Reader identity	0.668*	0.455	0.068**	0.017	0.05**	0.004
6.1 Effort to learn	1.131**	0.347	0.103**	0.029	0.093**	0.055*
7.1 Growth mindset	1.938**	-0.106	0.099**	0.025	0.079**	-0.006

NOTE: The coefficients here show γ_2 and γ_3 from Equation 2. * significant at the 0.05 level, ** significant at the 0.01 level
SOURCE: IMPAQ staff calculations.

Exhibit 67 reports the construct coefficient γ_2 in equation 1, which describes the relationship between teacher survey constructs and student literacy outcomes. Exhibit 68 reports the construct coefficient γ_2 and the treatment-construct interaction term coefficient γ_3, which presents any differential relationship attributable to the treatment group.

Exhibit 67. Construct Coefficient (γ_2) for Relationship between Teacher Survey Constructs and Student Outcomes, Year 2

	DRP	State ELA	State Math
TEACHING PRACTICES	0.017	0.019	-0.035*
Metacognition			
4.1 Metacognitive Inquiry: Teacher Modeling	0.100	0.002	-0.039**
4.2 Metacognitive Inquiry: Student Practice	0.029	0.021^	-0.023^
Social Dimension			
3.1 Collaborative Activities: Teacher Modeling	-0.081	0.022	-0.003
3.2 Collaborative Activities: Student Practice	-0.341	0.007	-0.031*
Cognitive Dimension			
5.1 Specific Comprehension Strategies: Teacher Modeling	0.298	0.010	-0.031*
5.2 Specific Comprehension Strategies: Student Practice	0.306	0.020	-0.025^
Knowledge-Building Dimension			
2.1 Content	-0.605*	-0.003	-0.053**
Reading			
1.1 Reading Opportunities: Texts (Breadth)	-0.143	-0.006	-0.012
1.2 Reading Opportunities: Learning Structure (Quantity)	-0.210	0.016	-0.017
Engaging			
6.1 Negotiating Success: Instruction and Assessment (Differentiated Instruction)	-0.173	0.000	-0.053**
Confidence			
7.1 Teacher Confidence	-0.282	0.035*	-0.016
Traditional			
8.1 Traditional Practices	0.054	-0.001	-0.051**

NOTE: The coefficients here show γ_2 from Equation 1. * significant at the 0.05 level, ** significant at the 0.01 level
SOURCE: IMPAQ staff calculations.

Exhibit 68. Construct Coefficient (γ_2) and Treatment-Construct Interaction Term Coefficient (γ_3) Describing Relationships between Teacher Survey Constructs & Student Outcomes, Year 2

	DRP		State ELA		State Math	
	γ_2	γ_3	γ_2	γ_3	γ_2	γ_3
TEACHING PRACTICES	-0.098	0.336	0.019	0.084*	-0.035*	0.088*
Metacognition						
4.1 Metacognitive Inquiry: Teacher Modeling	0.072	0.056	0.002	0.082**	-0.039**	0.094**
4.2 Metacognitive Inquiry: Student Practice	-0.217	0.598	0.021^	0.072**	-0.023^	0.064*
Social Dimension						
3.1 Collaborative Activities: Teacher Modeling	0.064	-0.422	0.022	0.076**	-0.003	0.083**
3.2 Collaborative Activities: Student Practice	-0.214	-0.349	0.007	0.07*	-0.031*	0.088**
Cognitive Dimension						
5.1 Specific Comprehension Strategies: Teacher Modeling	0.120	0.502	0.010	0.045^	-0.031*	0.059*
5.2 Specific Comprehension Strategies: Student Practice	0.278	0.067	0.020	0.031	-0.025^	0.045
Knowledge-Building Dimension						
2.1 Content	-1.026**	1.266*	-0.003	0.106**	-0.053**	0.068*
Reading						
1.1 Reading Opportunities: Texts (Breadth)	-0.077	-0.199	-0.006	0.057*	-0.012	0.088**
1.2 Reading Opportunities: Learning Structure (Quantity)	-0.406^	0.629	0.016	0.032	-0.017	0.001
Engaging						
6.1 Negotiating Success: Instruction and Assessment (Differentiated Instruction)	-0.316	0.407	0.000	0.069*	-0.053**	0.041
Confidence						
7.1 Teacher Confidence	-0.265	-0.046	0.035*	0.097**	-0.016	0.025
Traditional						
8.1 Traditional Practices	-1.185**	2.297**	-0.001	0.085**	-0.051**	0.086**

NOTE: The coefficients here show γ_2 and γ_3 from Equation 2. * significant at the 0.05 level, ** significant at the 0.01 level
SOURCE: IMPAQ staff calculations.

Student-level Correlations

Lastly, exhibits 69 and 70 show the correlational relationship between teacher survey and student survey constructs for Year 1 and Year 2, respectively. The relationship between teacher and student survey responses is not always consistent. Some of the most notable relationships include the following:

- Metacognitive inquiry strategies
  - Practiced by students as reported by teachers are moderately correlated with the use of metacognitive strategies reported by students in Year 1, and weakly correlated in Year 2
  - Modeled and reported by teachers are only weakly correlated with student use of such strategies, as reported by students in both study years

- Collaborative activities reported by teachers are only weakly negatively correlated with student participation in classroom discussions in Year 1 and weakly correlated in Year 2
- Specific comprehension strategies reported by teachers
    - Are moderately correlated with support reading strategies reported by students in both years
    - But are only weakly correlated (some negatively) with the use of global reading strategies and problem-solving strategies by students
- The amount of reading opportunities reported by teachers is mostly weakly correlated with both the variety and quantity of reading materials reported by students in both years
- Students' growth mindset is weakly negatively correlated with most teaching practices in both study years, except for in Year 1, where it is moderately negatively correlated with specific comprehension strategies reported by teachers
- Student beliefs are mostly weakly correlated (some negatively) with teaching practices, as reported by teachers in both years, except when looking at the relationship between reader identity and collaborative activities, metacognitive inquiry, and use of specific comprehension strategies.

Exhibit 69. Student-Level Correlations between Student Survey Constructs and Teacher Survey Constructs, Year 1

Teacher Survey

Student Survey	1.1 Reading Opportunities: Texts (Breadth)	1.2 Reading Opportunities: Learning Structure (Quantity)	2 Content	3.1 Collaborative Activities: Teacher Modeling	3.2 Collaborative Activities: Student Practice	4.1 Meta-cognitive Inquiry: Teacher Modeling	4.2 Meta-cognitive Inquiry: Student Practice	5.1 Specific Comprehension Strategies: Teacher Modeling	5.2 Specific Comprehension Strategies: Student Practice	6 Negotiating Success: Instruction and Assessment	7 Teacher Confidence	8 Traditional Practices
1.1 Participation/ contribution to class discussion	-0.203	0.025	-0.132	-0.260	-0.158	-0.151	-0.279	-0.359	-0.290	0.058	-0.325	-0.138
1.2 Collaborate effectively/respectfully with peers	0.033	-0.054	0.335	0.239	0.295	0.089	0.248	0.111	0.022	-0.106	-0.076	-0.116
1.3 Belonging	-0.088	0.045	0.243	0.056	0.035	0.039	0.067	-0.129	-0.173	-0.166	-0.229	-0.273
2.1 Use of global reading strategies	0.091	-0.258	0.219	0.184	0.383	-0.101	0.247	0.269	0.200	0.051	0.078	0.288
2.2 Use of problem-solving strategies	-0.216	-0.325	0.070	-0.105	0.069	-0.287	-0.119	-0.146	-0.102	-0.290	-0.212	0.080
2.3 Support reading strategies	0.385	-0.187	0.211	0.395	0.483	0.060	0.487	0.566	0.466	0.219	0.225	0.391
2.4 Integration of content and literacy activity	0.104	-0.129	0.300	0.188	0.344	-0.032	0.232	0.154	0.140	0.036	0.007	0.194
3.1 Metacognitive Inquiry	0.333	-0.050	0.371	0.413	0.536	0.157	0.501	0.408	0.384	0.123	0.226	0.083
4.1 Student identity	-0.137	-0.192	0.137	-0.015	0.058	-0.125	0.006	-0.113	-0.115	-0.179	-0.218	0.016
4.2 Reader identity	0.309	-0.038	0.289	0.305	0.501	0.082	0.377	0.376	0.282	0.302	0.210	0.268
5.1 Class time spent reading	-0.015	0.285	0.177	0.086	0.156	-0.080	-0.005	-0.183	-0.014	0.217	0.027	-0.436

Teacher Survey

Student Survey	1.1 Reading Opportunities: Texts (Breadth)	1.2 Reading Opportunities: Learning Structure (Quantity)	2 Content	3.1 Collaborative Activities: Teacher Modeling	3.2 Collaborative Activities: Student Practice	4.1 Meta-cognitive Inquiry: Teacher Modeling	4.2 Meta-cognitive Inquiry: Student Practice	5.1 Specific Comprehension Strategies: Teacher Modeling	5.2 Specific Comprehension Strategies: Student Practice	6 Negotiating Success: Instruction and Assessment	7 Teacher Confidence	8 Traditional Practices
5.2 Variety of reading material	0.186	0.020	0.250	0.183	0.368	0.113	0.190	0.171	0.174	0.152	0.272	0.080
5.3 Pages of reading per day	-0.025	0.316	-0.061	-0.138	-0.039	0.065	-0.024	-0.170	-0.124	-0.138	0.093	-0.299
6.1 Effort to learn	-0.173	-0.066	0.278	-0.039	0.161	-0.097	-0.023	-0.192	-0.178	-0.263	-0.164	-0.120
6.2 Engaging instruction	0.196	-0.066	0.293	0.305	0.396	0.134	0.327	0.248	0.239	0.134	0.139	-0.062
7.1 Growth mindset	-0.464	0.036	-0.205	-0.299	-0.327	-0.227	-0.368	-0.568	-0.435	-0.281	-0.373	-0.548

NOTE: Shading is based on the sign and size of the correlation coefficients.
SOURCE: IMPAQ staff calculations.

Exhibit 70. Student-Level Correlations between Student Survey Constructs and Teacher Survey Constructs, Year 2

Teacher Survey

Student Survey	1.1 Reading Opportunities: Texts (Breadth)	1.2 Reading Opportunities: Learning Structure (Quantity)	2 Content	3.1 Collaborative Activities: Teacher Modeling	3.2 Collaborative Activities: Student Practice	4.1 Meta-cognitive Inquiry: Teacher Modeling	4.2 Meta-cognitive Inquiry: Student Practice	5.1 Specific Comprehension Strategies: Teacher Modeling	5.2 Specific Comprehension Strategies: Student Practice	6 Negotiating Success: Instruction and Assessment	7 Teacher Confidence	8 Traditional Practices
1.1 Participation/contribution to class discussion	0.039	-0.174	0.174	0.153	0.110	0.149	0.257	0.097	0.072	0.062	0.220	0.204
1.2 Collaborate effectively/respectfully with peers	0.202	-0.065	0.456	0.543	0.412	0.274	0.485	0.430	0.367	0.317	0.375	0.151
1.3 Belonging	0.208	0.091	0.320	0.436	0.448	0.246	0.322	0.274	0.468	0.224	0.275	0.166
2.1 Use of global reading strategies	0.032	-0.181	0.121	0.107	0.093	0.101	0.346	0.338	0.217	0.333	0.079	0.341
2.2 Use of problem-solving strategies	0.031	-0.019	0.180	0.146	0.127	0.150	0.232	0.248	0.121	0.129	0.127	0.198
2.3 Support reading strategies	0.151	-0.220	0.175	0.211	0.138	0.182	0.510	0.510	0.311	0.324	0.139	0.478
2.4 Integration of content and literacy activity	0.233	-0.139	0.305	0.374	0.346	0.350	0.605	0.504	0.409	0.480	0.335	0.324
3.1 Metacognitive Inquiry	0.135	-0.082	0.298	0.358	0.220	0.281	0.509	0.453	0.319	0.455	0.324	0.216
4.1 Student identity	-0.118	-0.137	0.156	0.040	-0.044	0.101	0.213	0.099	0.191	-0.011	0.137	0.250
4.2 Reader identity	0.193	-0.127	0.280	0.277	0.286	0.339	0.558	0.520	0.436	0.483	0.268	0.452
5.1 Class time spent reading	0.190	0.376	0.062	0.081	0.124	0.187	0.128	-0.016	0.011	0.401	-0.011	0.137

Student Survey	Teacher Survey: 1.1 Reading Opportunities: Texts (Breadth)	1.2 Reading Opportunities: Learning Structure (Quantity)	2 Content	3.1 Collaborative Activities: Teacher Modeling	3.2 Collaborative Activities: Student Practice	4.1 Meta-cognitive Inquiry: Teacher Modeling	4.2 Meta-cognitive Inquiry: Student Practice	5.1 Specific Comprehension Strategies: Teacher Modeling	5.2 Specific Comprehension Strategies: Student Practice	6 Negotiating Success: Instruction and Assessment	7 Teacher Confidence	8 Traditional Practices
5.2 Variety of reading material	0.020	-0.063	0.033	0.151	0.070	0.096	0.278	0.132	0.074	0.496	0.200	0.008
5.3 Pages of reading per day	0.212	0.256	-0.017	0.098	0.177	0.088	0.088	0.022	0.120	0.424	0.212	-0.210
6.1 Effort to learn	0.036	-0.059	0.087	0.255	0.166	0.034	0.271	0.166	0.122	0.450	0.188	-0.024
6.2 Engaging instruction	0.243	0.006	0.331	0.366	0.271	0.446	0.441	0.453	0.476	0.403	0.420	0.338
7.1 Growth mindset	0.093	0.179	0.136	0.101	0.028	-0.069	-0.105	-0.273	-0.229	-0.280	0.114	-0.297

NOTE: Shading is based on the sign and size of the correlation coefficients.
SOURCE: IMPAQ staff calculations.

10.8. Instruments (Surveys, Focus Groups)

Teacher Survey

Exhibit 71. Teacher Survey Items

	Question text	Response Scale
Extensive Reading Dimension		
Construct 1.1: Reading Opportunities: Texts (Breadth) Question: During the past four weeks, how often did YOU do the following in your [target class]? *Variations:* (TS2, TS3, TS4, TS5)—The following questions ask about your and your students' activities in the target class DURING THE PAST FOUR WEEKS. During the past four weeks, how often did YOU do the following in your [target class]?		
	Provide supplementary materials to extend the range of texts students read in your subject area	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Provide supplementary materials to engage students in reading about subject area topics	
	Provide a variety of reading materials based on students' knowledge and experiences	
	Provide supplementary materials to add contrasting perspectives or ideas	
	Select particular excerpts from course texts to focus student attention on subject area reading skills	
Construct 1.2: Reading Opportunities: Learning Structure Question: During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?		
	Begin reading for homework assignment in class	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Read assigned materials silently in class	
	Read self-selected material in class	
Construct 2: Content Question: During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?		
	Discuss the meaning of reading materials with partners or small groups	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Discuss homework reading assignments in a teacher-facilitated, whole-class setting	
	Discuss the content of assigned reading materials in a whole-class setting	
	Encourage students to make sense of the content of reading materials rather than relying on you to explain them *Variation:* (TS4, TS5) Encourage students to make sense of the content of reading materials rather than relying on you to explain it to them	
Construct 3.1: Collaborative Activities: Teacher Modeling Question: During the past four weeks, how often did YOU do the following in your [target class]?		
	Encourage students to work together to answer their own questions about the reading	1=Never 2=1–2 times

	Question text	Response Scale
	Provide explicit instruction on behaviors that promote student-to-student talk (e.g., how to listen and respond to peers, civilly challenge and critique others' ideas)	3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Model behaviors that foster productive student to student talk (e.g., listen and respond to peers, civilly challenge and critique others' ideas)	
	Support conversational routines to promote student-to-student talk (e.g., think-pair-share)	
	Join small groups to model and facilitate group conversation and thinking during group work	
Construct 3.2: Collaborative Activities: Student Practice Question: During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?		
	Work in mixed-ability groups	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Share individual or small group thinking with the whole class	
	Reflect on how to work together more effectively and productively	
	Critique and challenge one another's ideas or work	
	Explain concepts to one another	
	Read and respond to one another's work	
Construct 4.1: Metacognitive Inquiry: Teacher Modeling Question: During the past four weeks, how often did YOU do the following in your [target class]?		
	Share your own interest in reading in your subject area with students	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Preview long or challenging texts to identify strategies for dealing with them	
	Demonstrate that reading academic materials is difficult for everyone—including yourself	
	Think aloud to model your own confusions and efforts to make sense of subject area reading materials	
	Pose questions designed to probe and deepen student thinking about reading and thinking processes	
	Discuss confusions and ways to make sense of reading materials in a whole-class, teacher-supported setting *Variations:* TS2, CHECK VARIATION IF PRESENT	
Construct 4.2: Metacognitive Inquiry: Student Practice Question: During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?		
	Discuss what was helpful or challenging about reading subject area materials	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Think aloud while reading subject area materials	
	Take notes focused on how they are making sense of reading materials	
	Discuss confusions and ways to make sense of reading materials with partners or small groups	
	Write comments on the text to support sensemaking	
	Share and discuss text annotations with partners or small groups	

	Question text	Response Scale
Construct 5.1: Specific Comprehension Strategies: Teacher Modeling Question: During the past four weeks, how often did YOU do the following in your [target class]?		
	Provide explicit instruction in reading comprehension strategies	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Model the use of various reading comprehension strategies	
	Provide ongoing support to students as they practice comprehension strategies with subject area reading materials	
	Monitor student use of comprehension strategies and re-teach as needed	
	Teach students how to set a reading purpose	
	Demonstrate how to break up and make sense of complex sentences in reading materials	
	Teach students how to clarify the meaning of subject area materials	
	Teach students how to ask and answer questions while reading	
	Show students how to use context to define unfamiliar vocabulary in course materials	
	Ask students for evidence from reading materials to support their ideas and conjectures	
Construct 5.2: Specific Comprehension Strategies: Student Practice Question: During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?		
	Make connections with prior knowledge and experiences	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Clarify the meaning of subject area materials they read	
	Ask their own questions to focus their reading	
	Draw inferences about the content of reading materials	
	Generate their own inquiry or thematic questions from the reading materials	
	Interpret figures, models, graphs, or illustrations in reading materials	
	Use context to define unfamiliar words while reading	
Construct 6: Negotiating Success: Instruction & Assessment Question: During the past four weeks, how often did YOU do the following in your [target class]?		
	Provide a variety of subject area reading materials based on students' reading levels	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Read materials you assign to students ahead of time to identify potential challenges and learning opportunities	
	Modify instruction based on assessment of students' comprehension of reading materials (e.g., add or reduce support)	
	Provide extra support for struggling readers	
	Allow students to work at their own pace	
	Mentor individuals or small groups during class time	
	Read and comment on reflections students have written (e.g., in their journals)	
	Listen in as students work with partners or small groups	
Construct 7: Teacher Confidence Question: Please rate your level of confidence in your ability to do the following:		
	Provide opportunities for reading a variety of texts of different types/genres	1=Very Low 2=Low
	Teach students to articulate their own thinking about texts	

	Question text	Response Scale
	Structure lessons so that students have to do the assigned reading in order to be successful	3=Moderate 4=High 5=Very High
	Support students in their attempts to understand disciplinary text (e.g., challenging literature, textbooks, primary documents, scientific articles)	
	Provide explicit instruction around reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	
	Model/demonstrate reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	
	Support students in working on reading activities in groups (small groups or whole class) (i.e., setting norms, creating safety, providing prompts that promote collaboration, and providing guidance/feedback)	
	Give students roles that make them responsible for making sense of texts (e.g., asking students to lead discussions or make arguments based on their interpretations of texts)	
	Facilitate students' active engagement in learning through the use of inquiry-based instructional methods (i.e., where students learn by questioning and problem-solving)	
	Ask students to pose questions and problems about course readings	
	Employ routines or assignments that are open-ended (e.g., group discussion; free choice in reading materials) so that all students feel comfortable participating and can have some measure of success	
Construct 8: Traditional Practices Question: During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?		
	Take turns reading aloud in whole-class setting	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Listen to teacher read aloud in whole-class setting	
	Listen and take notes on teacher lecture on the content of reading materials in whole-class setting	
Question: During the past four weeks, how often did YOU do the following in your [target class]?		
	Present the important information from a reading assignment verbally to make sure everyone gets it	1=Never 2=1–2 times 3=About once *a week* 4=2–3 times *a week* 5=Daily or almost daily
	Give a lecture to present subject area content to the class	

Student Survey

Exhibit 72. Student Survey Items

Domain 1: Increased collaboration in a community of readers and writers		
Construct 1.1: Participation/contribution to class discussions—Building a safe community of readers **Construct 1.2:** Collaborate effectively/respectfully with peers—Definition: Effective and respectful collaboration with peers, drawing on each other's knowledge, and serving as resources to make sense of text together as a class, in small groups, or with partners **Construct 1.3:** Belonging		
Construct 1.1: Participation/contribution to class discussions		
Variable Name	Item	Measure/Scale

PEAV_1	I don't participate in class discussion because I'm afraid I will sound stupid. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Performance Avoidance (PEAV)
PEAV_2	I would rather do easy work that I can do well than challenging work where I might learn more. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Performance Avoidance (PEAV)
PEAV_3	I don't ask questions in class because I don't want people to think I'm dumb. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Performance Avoidance (PEAV)
PEAV_4	I stop doing work if I feel like I can't do it well. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Performance Avoidance (PEAV)
PEAV_5	I only volunteer to answer a question in this class if I know my answer is right. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Performance Avoidance (PEAV)
Construct 1.2: Collaborate effectively/respectfully with peers		
Variable Name	Item	Measure/Scale
COLLAB_1	How much does this class include each of the following: Learning from one another's different ways of reading and thinking. (1 = None, 2 = Very little, 3 = Some, 4 = A lot)	OTL
COLLAB_2	How much does this class include each of the following: Working together to figure out the meaning of the readings. (1 = None, 2 = Very little, 3 = Some, 4 = A lot)	OTL
COLLAB_3	How much does this class include each of the following: Listening and responding to one another's ideas. (1 = None, 2 = Very little, 3 = Some, 4 = A lot)	OTL
COLLAB_4	How often has <u>your teacher</u> done each of the following in this class: Encouraged students to borrow one another's ideas. (1 = Never, 2 = Sometimes, 3 = Often, 4 = Very often)	OTL
COLLAB_5	How often have <u>you and your classmates</u> done each of the following in this class: Worked with partners or groups on reading assignments in class. (1 = Never, 2 = Sometimes, 3 = Often, 4 = Very often)	OTL
Construct 1.3: Belonging		
Variable Name	Item	Measure/Scale
CBEL_1	Most of my classmates encourage each other to work hard in this class. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Belonging (CBEL)
CBEL_2	Students feel comfortable actively participating in this class. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Belonging (CBEL)
CBEL_3	My teacher gives us lots of opportunities to work with each other. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Belonging (CBEL)
CBEL_4	My teacher makes sure that students get to know each other. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Belonging (CBEL)
CBEL_5	The teacher puts effort into making sure this class is a welcoming place for everyone. (1 = Not at all true; 2 = A little true; 3 = Somewhat true; 4 = Mostly true; 5 = Completely true)	BELS-S, Belonging (CBEL)

RAAD Evaluation Teacher Survey 1

Thank you for participating in the Reading Apprenticeship Across the Disciplines (RAAD) project. This survey will ask you about teaching practices you use in one of your classes (we will refer to this as your "target class") and related events or professional development you attend as part of the project.

The information you provide in this survey is being collected for research purposes only and will be kept strictly confidential. Responses will only be reported in aggregate. No individual names or schools will be reported.

Please note:

Do not click the "Submit" button until you are satisfied with your responses. While taking this survey, if you wish to go back and review previous responses, you may do so by clicking the "previous" button at the bottom of the screen. However, once you click "submit" at the end of the survey, you will not be able to go back and change your responses.

This survey should take approximately 30-40 minutes to complete.

If you encounter any problems, please contact Katie Allen at kallen@impaqint.com or 443.259.5270.

ELIGIBILITY *(ALL TEACHERS WILL SEE THE QUESTIONS IN THIS GROUP)*

1 **[ELIGIBLE_Q1] In order to remain an active participant in the RAAD study, you must be the primary classroom teacher in at least one core 7th or 8th grade academic class at {SCHOOL} for the 2016--17 school year.**

Do you meet these criteria?

Please choose **only one** of the following:

- O Yes, I am the primary classroom teacher in at least one core academic class at {SCHOOL} this year.
- O I have moved into a non--teaching position at {SCHOOL} (e.g., support specialist, administrator) and/or I am only teaching non--core academic courses (e.g., PE, art, foreign language).
- O I no longer work at {SCHOOL}.

2 **[INELIGIBLE] Based on your response, you are not eligible to participate in the Reading Apprenticeship Across the Disciplines (RAAD) Evaluation. This does not affect your eligibility for any RAAD professional development in which you are participating in this year.**

If you have questions about the eligibility requirements for participating in the RAAD project, please contact Eliana Saltares at esaltares@impaqint.com or (202) 774-1972.

Thank you for completing this survey!

Only answer this question if the following conditions are met:
Answer was 'I no longer work at {SCHOOL}. 'or 'I have moved into a non--teaching position at {SCHOOL} (e.g., support specialist, administrator) and/or I am only teaching non--core academic courses (e.g., PE, art, foreign language).' at question '1 [TARGETQ1]' (In order to remain an active participant in the RAAD study, you must be the primary classroom teacher in at least one core academic class at {SCHOOL} for the 2016-17 school year. Do you meet these criteria? Choose one of the following answers.)

DEMOGRAPHICS *(ALL TEACHERS WILL SEE THE QUESTIONS IN THIS GROUP)*

3 **[DEMOG_Q1] Prior to the 2016-17 school year, how many years have you been at least a half--time classroom teacher?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

4 **[DEMOG_Q2] Prior to the 2016-17 school year, how many years have you taught {SUBJECT} at least half time?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

5 **[DEMOG_Q3] What is your gender?**

Please choose **only one** of the following:

- O Female
- O Male

6 **[DEMOG_Q4] What is the highest level of education you have completed?**

Please choose **only one** of the following:

- O Bachelor's
- O Master's
- O Educational Specialist or professional diploma
- O Doctorate
- O Other:_____

7 **[DEMOG_Q5] Do you have a certification as a reading or literacy specialist?**

Please choose **only one** of the following:

- O Yes
- O No

8 **[DEMOG_Q6] What is your ethnicity?**

Please choose **only one** of the following:

- O African-American
- O American Indian/Alaskan Native
- O Asian
- O Hawaiian/Pacific Islander

- O Hispanic
- O White
- O Other:_____

9 **[DEMOG_Q7] Please indicate the type of schedule your school follows:**

Please choose **only one** of the following:

- O Semester
- O Trimester
- O Quarter
- O Other:_____

PRACTICE QUESTIONS *(ALL TEACHERS WILL SEE THE QUESTIONS IN THIS GROUP)*

CONSTRUCT: READING OPPORTUNITIES: TEXTS (*New Items*, Substitute for Q 4 in NSF survey)

The following questions ask about your and your students' activities in the target class DURING THE PAST FOUR WEEKS.

10. **[PRACQ1] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide supplementary materials to extend the range of texts students read in your subject area	O	O	O	O	O
b. Provide supplementary materials to engage students in reading about subject area topics	O	O	O	O	O
c. Provide a variety of reading materials based on students' knowledge and experiences	O	O	O	O	O
d. Provide supplementary materials to add contrasting perspectives or ideas	O	O	O	O	O
e. Select particular excerpts from course texts to focus student attention on subject area reading skills	O	O	O	O	O

CONSTRUCT: READING OPPORTUNITIES: LEARNING STRUCTURE (NSF Q8)

11. **[PRACQ2] During the past four weeks, how often did your STUDENTS engage in the following reading-related activities in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Begin reading for homework assignment in class	O	O	O	O	O
b. Read assigned materials silently in class	O	O	O	O	O
c. Read self-selected material in class	O	O	O	O	O
d. (-) Take turns reading aloud in whole-class setting	O	O	O	O	O

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
e. (-) Listen to teacher read aloud in whole-class setting	O	O	O	O	O
CONSTRUCT: CONTENT	O	O	O	O	O
f. (-) Listen and take notes on teacher lecture on the content of reading materials in whole-class setting	O	O	O	O	O
g. Discuss the meaning of reading materials with partners or small groups	O	O	O	O	O

CONSTRUCT: CONTENT (NSF Q 8, 9, 12, 19)

12. **[PRACQ3] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Discuss homework reading assignments in a teacher-facilitated, whole-class setting	O	O	O	O	O
b. (-) Present the important information from a reading assignment verbally to make sure everyone understands the material	O	O	O	O	O
c. Discuss the content of assigned reading materials in a whole class setting	O	O	O	O	O
d. (-) Give a lecture to present subject area content to the class	O	O	O	O	O
e. Encourage students to make sense of the content of reading materials rather than relying on you to explain them	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: TEACHER MODELING, GUIDANCE, SUPPORT (NSF Q 17 & 19)

13. **[PRACQ4] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Encourage students to work together to answer their own questions about the reading	O	O	O	O	O
b. Provide explicit instruction on behaviors that promote student-to-student talk (e.g., how to listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O
c. Model behaviors that foster productive student to student talk (e.g., listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O

	Never	1-2 times	*About once a week*	*2-3 times a week*	Daily or almost daily
d. (-) Use student group work time to catch up on teaching related tasks, such as lesson planning and grading.	O	O	O	O	O
e. Support conversational routines to promote student-to-student talk (e.g., think-pair-share)	O	O	O	O	O
f. Join small groups to model and facilitate group conversation and thinking during group work	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: STUDENT PRACTICE (NSF Q 16 & 17)

14. **[PRACQ5] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Work in mixed ability groups	O	O	O	O	O
b. Share individual or small group thinking with the whole class	O	O	O	O	O
c. Reflect on how to work together more effectively and productively	O	O	O	O	O
d. Critique and challenge one another's ideas or work	O	O	O	O	O
e. Explain concepts to one another	O	O	O	O	O
f. Read and respond to one another's work	O	O	O	O	O

CONSTRUCT: METACOGNITIVE INQUIRY: TEACHER MODELING, GUIDANCE, SUPPORT (NSF Q 9, 11, 12)

15. **[PRACQ6] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Share your own interest in reading in your subject area with students	O	O	O	O	O
b. Preview long or challenging texts to identify strategies for dealing with them	O	O	O	O	O
c. Demonstrate that reading academic materials is difficult for everyone—including yourself	O	O	O	O	O
d. Think aloud to model your own confusions and efforts to make sense of subject area reading materials	O	O	O	O	O
e. Pose questions designed to probe and deepen student thinking about reading and thinking processes	O	O	O	O	O

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
f. Discuss confusions and ways to make sense of reading materials in a whole class, teacher-supported setting	O	O	O	O	O

CONSTRUCT: METACOGNTIVE INQUIRY: STUDENT PRACTICE (NSF Q 10 & 12)

16. [PRACQ7] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Discuss what was helpful or challenging about reading subject area materials	O	O	O	O	O
b. Think aloud while reading subject area materials	O	O	O	O	O
c. Take notes focused on how they are making sense of reading materials	O	O	O	O	O
d. Discuss confusions and ways to make sense of reading materials with partners or small groups	O	O	O	O	O
e. Write comments on the text to support sensemaking	O	O	O	O	O
f. Share and discuss text annotations with partners or small groups	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: TEACHER MODELING, GUIDANCE, SUPPORT (NSF Q 14)

17. [PRACQ8] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide explicit instruction in reading comprehension strategies	O	O	O	O	O
b. Model the use of various reading comprehension strategies	O	O	O	O	O
c. Provide ongoing support to students as they practice comprehension strategies with subject area reading materials	O	O	O	O	O
d. Monitor student use of comprehension strategies and re-teach as needed	O	O	O	O	O
e. Teach students how to set a reading purpose	O	O	O	O	O
f. Demonstrate how to break up and make sense of complex sentences in reading materials	O	O	O	O	O

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
g. Teach students how to clarify the meaning of subject area materials	O	O	O	O	O
h. Teach students how to ask and answer questions while reading	O	O	O	O	O
i. Show students how to use context to define unfamiliar vocabulary in course materials	O	O	O	O	O
j. Ask students for evidence from reading materials to support their ideas and conjectures	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: STUDENT PRACTICE (NSF Q 12 & 13)

18. [PRACQ9] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Make connections with prior knowledge and experiences	O	O	O	O	O
b. Clarify the meaning of subject area materials they read	O	O	O	O	O
c. Ask their own questions to focus their reading	O	O	O	O	O
d. Draw inferences about the content of reading materials	O	O	O	O	O
e. Generate their own inquiry or thematic questions from the reading materials	O	O	O	O	O
f. Interpret figures, models, graphs or illustrations in reading materials	O	O	O	O	O
g. Use context to define unfamiliar words while reading	O	O	O	O	O

CONSTRUCT: NEGOTIATING SUCCESS: INSTRUCTION AND ASSESSMENT (NSF Q 9, 14, 18; NSF Q 16, *new item*)

19. [PRACQ10] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Provide a variety of subject area reading materials based on students' reading levels	O	O	O	O	O
b. Read materials you assign to students ahead of time to identify potential challenges and learning opportunities	O	O	O	O	O

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
c. Modify instruction based on assessment of students' comprehension of reading materials (e.g., add or reduce support)	O	O	O	O	O
d. Provide extra support for struggling readers	O	O	O	O	O
e. Allow students to work at their own pace	O	O	O	O	O
f. Mentor individuals or small groups during class time	O	O	O	O	O
g. Read and comment on reflections students have written (e.g., in their journals)	O	O	O	O	O
h. Listen in as students work with partners or small groups	O	O	O	O	O

ATTITUDE – TR

20 **[ATTQ1-2] Please rate your level of confidence in your ability to do the following:**
Please choose the appropriate response for each item:

	Very Low	Low	Moderate	High	Very High
a. Provide opportunities for reading a variety of texts of different types/genres	O	O	O	O	O
b. Teach students to articulate their own thinking about texts	O	O	O	O	O
c. Structure lessons so that students have to do the assigned reading in order to be successful	O	O	O	O	O
d. Support students in their attempts to understand disciplinary text (e.g., challenging literature, textbooks, primary documents, scientific articles)	O	O	O	O	O
e. Provide explicit instruction around reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O
f. Model/demonstrate reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O
g. Support students in working on reading activities in groups (small groups or whole class), (i.e., setting norms, creating safety, providing prompts that promote collaboration, and providing guidance/feedback)	O	O	O	O	O
h. Give students roles that make them responsible for making sense of texts (e.g., asking students to lead discussions or make arguments based on their interpretations of texts)	O	O	O	O	O
i. Facilitate students' active engagement in learning through the use of inquiry-based instructional methods	O	O	O	O	O

	Very Low	Low	Moderate	High	Very High
(i.e., where students learn by questioning and problem-solving)					
j. Ask students to pose questions and problems about course readings	O	O	O	O	O
k. Employ routines or assignments that are open-ended (e.g., group discussion; free choice in reading materials) so that all students feel comfortable participating and can have some measure of success)	O	O	O	O	O

PROFESSIONAL LEARNING - *(ALL TEACHERS WILL SEE THE QUESTIONS IN THIS GROUP)*

21 **[PDQ1] Have you ever attended any Reading Apprenticeship training?**

Please choose **only one** of the following:

- O Yes
- O No

22 **[PDQ2] Did you attend any Reading Apprenticeship training prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ1 above]

Please choose **only one** of the following:

- O Yes
- O No

23 **[PDQ3] During which year(s), prior to the summer of 2016, did you attend Reading Apprenticeship training?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please choose **all** that apply:

- O Winter and/or spring of 2016
- O 2015
- O 2014
- O 2013
- O Prior to 2013

24 **[PDQ4] Approximately how many days of Reading Apprenticeship training did you attend, in total, prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please write your answer here: (only numbers may be entered in this field)

PROFESSIONAL LEARNING - TREATMENT GROUP ONLY

The following questions ask you about RAAD Professional Learning Communities (PLCs), a monthly, online learning group of teachers participating in Reading Apprenticeship Across the Disciplines.

25 **[PDQ5] The first PLC online learning group meeting took place during the week of September 12-15, 2016. Did you attend the meeting?**

Please choose **only one** of the following:

- O Yes
- O No
- O

26 **[PDQ6] If you missed the PLC meeting during the week of September 12-15, 2016, what was your primary reason for not attending?**

[Skip pattern- respondents will only see this question if they answer NO to PDQ17 above]

Please choose **all** that apply:

- O I had other obligation(s) at that time
- O I was not interested
- O I had technical problems connecting/logging into the online PLC meeting.
- O I didn't know when the PLC meeting(s) were offered
- O Other:_____

27 **[PDQ7] To what extent do you agree with the following statements about the PLC meeting(s) you attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ17 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The PLC makes me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O
d. Hearing my colleagues share their approaches and challenges informed my own practice.	O	O	O	O	O
e. I felt supported by the PLC facilitator.	O	O	O	O	O
f. I got the information I needed from the PLC facilitator.	O	O	O	O	O
g. The PLC caused me to reflect on my own practices.	O	O	O	O	O

28 **[PDQ8] How helpful was the PLC meeting you attended for implementing RAAD strategies in your classroom?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ17 above]

Please choose **only one** of the following:

- O Not at all helpful
- O Less than moderately helpful
- O Moderately helpful
- O More than moderately helpful
- O Very helpful

The following questions ask you about the Reading Apprenticeship Across the Disciplines Monthly Site-based School Team Meetings.

29 **[PDQ9] Have you attended any RAAD site-based school team meetings at your school since the beginning of the 2016-17 school year?**

Please choose **only one** of the following:

- O Yes
- O No

30 **[PDQ10] If you missed any RAAD site-based school team meeting(s) since the beginning of the 2016-17 school year, what was your primary reason for not attending?**

[Skip pattern- respondents will only see this question if they answer NO to PDQ32 above]

Please choose **all** that apply:

- O I had other obligation(s) at that time
- O I was not interested
- O I didn't know when the team meeting(s) were offered
- O Other:_____

31 **[PDQ11] To what extent do you agree with the following statements about the RAAD site-based school team meeting(s) you have attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ32 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The site-based school team meetings make me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O
d. Hearing my colleagues share their approaches and challenges has informed my own practice.	O	O	O	O	O
e. The school team meetings have caused me to reflect on my own practices.	O	O	O	O	O

32 **[PDQ12] How helpful was the RAAD site-based school team meeting(s) you attended for implementing Reading Apprenticeship strategies in your classroom?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ32 above]

Please choose **only one** of the following:

- O Not at all helpful
- O Less than moderately helpful
- O Moderately helpful
- O More than moderately helpful
- O Very helpful

33 **[PDQ13] What challenges have you faced in implementing Reading Apprenticeship? [Check all that apply.]**

- ☐ Lack of materials
- ☐ Lack of parent support
- ☐ Lack of administrative support

- ☐ Too much work to implement
- ☐ Competing priorities
- ☐ Student behavior
- ☐ Student ability
- ☐ Lack of understanding of how to implement Reading Apprenticeship in my class
- ☐ Not enough training in Reading Apprenticeship
- ☐ None
- ☐ Other_____

34 **[PDQ14] Are there any school district policy constraints that make the implementation of Reading Apprenticeship difficult?**

- ☐ Yes
- ☐ No

If "Yes," please describe:

35 **[PDQ15] Please share any comments/questions you have about the Reading Apprenticeship approach.**

Please write your answer here:

CLOSING QUESTIONS - TREATMENT AND CONTROL GROUP

36 **[GENQ1] Please share any comments/questions about this research project in general.**

Please write your answer here:

37 **[GENQ2] Please comment on any problems you had with this survey or any suggestions you have for improving it.**

Please write your answer here:

RAAD Evaluation Teacher Survey 2 (Winter 2017)

Thank you for participating in the Reading Apprenticeship Across the Disciplines (RAAD) project. This survey will ask you about teaching practices you use in one of your classes (we will refer to this as your "target class") and related events or professional development you attend as part of the project.

The information you provide in this survey is being collected for research purposes only and will be kept strictly confidential. Responses will only be reported in aggregate. No individual names or schools will be reported.

Please note:

Do not click the "Submit" button until you are satisfied with your responses. While taking this survey, if you wish to go back and review previous responses, you may do so by clicking the "previous" button at the bottom of the screen. However, once you click "submit" at the end of the survey, you will not be able to go back and change your responses.

This survey should take approximately 20 minutes to complete.

If you encounter any problems, please contact Katie Allen at kallen@impaqint.com or 443.259.5270.

DEMOGRAPHICS *(ONLY TEACHERS WHO DID NOT RESPOND IN PRIOR SURVEY WILL SEE THE QUESTIONS IN THIS GROUP)*

1 **[DEMOG_Q1] Prior to the 2016-17 school year, how many years have you been at least a half--time classroom teacher?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

2 **[DEMOG_Q2] Prior to the 2016-17 school year, how many years have you taught {SUBJECT} at least half time?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

3 **[DEMOG_Q3] What is your gender?**

Please choose **only one** of the following:

- O Female
- O Male

4 **[DEMOG_Q4] What is your ethnicity?**

Please choose **all** that apply:

- O African-American
- O American Indian/Alaskan Native
- O Asian
- O Hawaiian/Pacific Islander
- O Hispanic
- O White
- O Other: _____

5 **[DEMOG_Q5] Do you have a certification as a reading or literacy specialist?**

Please choose **only one** of the following:

- O Yes
- O No

6 **[DEMOG_Q6] What is the highest level of education you have completed?**

Please choose **only one** of the following:

- O Bachelor's
- O Master's

- O Educational Specialist or professional diploma
- O Doctorate
- O Other:_____

7 **[DEMOG_Q7] Please indicate the type of schedule your school follows:**

Please choose **only one** of the following:

- O Semester
- O Trimester
- O Quarter
- O Other:_____

PRACTICE QUESTIONS *(ALL TEACHERS WILL SEE THE QUESTIONS IN THIS GROUP)*
CONSTRUCT: READING OPPORTUNITIES: TEXTS (*New Items*, Substitute for Q 4 in NSF survey)
The following questions ask about your and your students' activities in the target class DURING THE PAST FOUR WEEKS.

8 **[PRACQ1] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide supplementary materials to extend the range of texts students read in your subject area	O	O	O	O	O
b. Provide supplementary materials to engage students in reading about subject area topics	O	O	O	O	O
c. Provide a variety of reading materials based on students' knowledge and experiences	O	O	O	O	O
d. Provide supplementary materials to add contrasting perspectives or ideas	O	O	O	O	O
e. Select particular excerpts from course texts to focus student attention on subject area reading skills	O	O	O	O	O

CONSTRUCT: READING OPPORTUNITIES: LEARNING STRUCTURE (NSF Q8)

9 **[PRACQ2] During the past four weeks, how often did your STUDENTS engage in the following reading-related activities in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Begin reading for homework assignment in class	O	O	O	O	O
b. Read assigned materials silently in class	O	O	O	O	O

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
c. Read self-selected material in class	O	O	O	O	O
d. (-) Take turns reading aloud in whole-class setting	O	O	O	O	O
e. (-) Listen to teacher read aloud in whole-class setting	O	O	O	O	O
CONSTRUCT: CONTENT	O	O	O	O	O
f. (-) Listen and take notes on teacher lecture on the content of reading materials in whole-class setting	O	O	O	O	O
g. Discuss the meaning of reading materials with partners or small groups	O	O	O	O	O

CONSTRUCT: CONTENT (NSF Q 8, 9, 12, 19)

10 **[PRACQ3] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Discuss homework reading assignments in a teacher-facilitated, whole-class setting	O	O	O	O	O
b. (-) Present the important information from a reading assignment verbally to make sure everyone gets it	O	O	O	O	O
c. Discuss the content of assigned reading materials in a whole class setting	O	O	O	O	O
d. (-) Give a lecture to present subject area content to the class	O	O	O	O	O
e. Encourage students to make sense of the content of reading materials rather than relying on you to explain them	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: TEACHER MODELING, GUIDANCE, SUPPORT (NSF Q 17 & 19)

13. [PRACQ4] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	*About once a week*	*2-3 times a week*	Daily or almost daily
a. Encourage students to work together to answer their own questions about the reading	O	O	O	O	O
b. Provide explicit instruction on behaviors that promote student-to-student talk (e.g., how to listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O
c. Model behaviors that foster productive student to student talk (e.g., listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O
d. (-) Use student group work time to catch up on teaching related tasks, such as lesson planning and grading.	O	O	O	O	O
e. Support conversational routines to promote student-to-student talk (e.g., think-pair-share)	O	O	O	O	O
f. Join small groups to model and facilitate group conversation and thinking during group work	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: STUDENT PRACTICE (NSF Q 16 & 17)

14. [PRACQ5] During the past four weeks, how often did <u>STUDENTS</u> engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Work in mixed ability groups	O	O	O	O	O
b. Share individual or small group thinking with the whole class	O	O	O	O	O
c. Reflect on how to work together more effectively and productively	O	O	O	O	O
d. Critique and challenge one another's ideas or work	O	O	O	O	O
e. Explain concepts to one another	O	O	O	O	O
f. Read and respond to one another's work	O	O	O	O	O

5

CONSTRUCT: METACOGNITIVE INQUIRY: TEACHER MODELING, GUIDANCE, SUPPORT (NSF Q 9, 11, 12)

15. [PRACQ6] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Share your own interest in reading in your subject area with students	O	O	O	O	O
b. Preview long or challenging texts to identify strategies for dealing with them	O	O	O	O	O
c. Demonstrate that reading academic materials is difficult for everyone—including yourself	O	O	O	O	O
d. Think aloud to model your own confusions and efforts to make sense of subject area reading materials	O	O	O	O	O
e. Pose questions designed to probe and deepen student thinking about reading and thinking processes	O	O	O	O	O
f. Discuss confusions and ways to make sense of reading materials in a whole class, teacher-supported setting	O	O	O	O	O

CONSTRUCT: METACOGNTIVE INQUIRY: STUDENT PRACTICE (NSF Q 10 & 12)

16. [PRACQ7] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Discuss what was helpful or challenging about reading subject area materials	O	O	O	O	O
b. Think aloud while reading subject area materials	O	O	O	O	O
c. Take notes focused on how they are making sense of reading materials	O	O	O	O	O
d. Discuss confusions and ways to make sense of reading materials with partners or small groups	O	O	O	O	O

e. Write comments on the text to support sensemaking	O	O	O	O	O
f. Share and discuss text annotations with partners or small groups	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: TEACHER MODELING, GUIDANCE, SUPPORT (NSF Q 14)

17. [PRACQ8] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide explicit instruction in reading comprehension strategies	O	O	O	O	O
b. Model the use of various reading comprehension strategies	O	O	O	O	O
c. Provide ongoing support to students as they practice comprehension strategies with subject area reading materials	O	O	O	O	O
d. Monitor student use of comprehension strategies and re-teach as needed	O	O	O	O	O
e. Teach students how to set a reading purpose	O	O	O	O	O
f. Demonstrate how to break up and make sense of complex sentences in reading materials	O	O	O	O	O
g. Teach students how to clarify the meaning of subject area materials	O	O	O	O	O
h. Teach students how to ask and answer questions while reading	O	O	O	O	O
i. Show students how to use context to define unfamiliar vocabulary in course materials	O	O	O	O	O
j. Ask students for evidence from reading materials to support their ideas and conjectures	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: STUDENT PRACTICE (NSF Q 12 & 13)

18. [PRACQ9] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Make connections with prior knowledge and experiences	O	O	O	O	O
b. Clarify the meaning of subject area materials they read	O	O	O	O	O
c. Ask their own questions to focus their reading	O	O	O	O	O
d. Draw inferences about the content of reading materials	O	O	O	O	O
e. Generate their own inquiry or thematic questions from the reading materials	O	O	O	O	O
f. Interpret figures, models, graphs or illustrations in reading materials	O	O	O	O	O
g. Use context to define unfamiliar words while reading	O	O	O	O	O

CONSTRUCT: NEGOTIATING SUCCESS: INSTRUCTION AND ASSESSMENT (NSF Q 9, 14, 18; NSF Q 16, *new item*)

19. [PRACQ10] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Provide a variety of subject area reading materials based on students' reading levels	O	O	O	O	O
b. Read materials you assign to students ahead of time to identify potential challenges and learning opportunities	O	O	O	O	O
c. Modify instruction based on assessment of students' comprehension of reading materials (e.g., add or reduce support)	O	O	O	O	O
d. Provide extra support for struggling readers	O	O	O	O	O
e. Allow students to work at their own pace	O	O	O	O	O

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
f. Mentor individuals or small groups during class time	O	O	O	O	O
g. Read and comment on reflections students have written (e.g., in their journals)	O	O	O	O	O
h. Listen in as students work with partners or small groups	O	O	O	O	O

ATTITUDE – TR

20 **[ATTQ1-2] Please rate your level of confidence in your ability to do the following:**
Please choose the appropriate response for each item:

	Very Low	Low	Moderate	High	Very High
a. Provide opportunities for reading a variety of texts of different types/genres	O	O	O	O	O
b. Teach students to articulate their own thinking about texts	O	O	O	O	O
c. Structure lessons so that students have to do the assigned reading in order to be successful	O	O	O	O	O
d. Support students in their attempts to understand disciplinary text (e.g., challenging literature, textbooks, primary documents, scientific articles)	O	O	O	O	O
e. Provide explicit instruction around reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O
f. Model/demonstrate reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O
g. Support students in working on reading activities in groups (small groups or whole class), (i.e., setting norms, creating safety, providing prompts that promote collaboration, and providing guidance/feedback)	O	O	O	O	O
h. Give students roles that make them responsible for making sense of texts (e.g., asking students to lead discussions or make arguments based on their interpretations of texts)	O	O	O	O	O
i. Facilitate students' active engagement in learning through the use of inquiry-based instructional methods (i.e., where students learn by questioning and problem-solving)	O	O	O	O	O

	Very Low	Low	Moderate	High	Very High
j. Ask students to pose questions and problems about course readings	O	O	O	O	O
k. Employ routines or assignments that are open-ended (e.g., group discussion; free choice in reading materials) so that all students feel comfortable participating and can have some measure of success)	O	O	O	O	O

PROFESSIONAL LEARNING - *(ONLY TEACHERS WHO DID NOT RESPOND IN PRIOR SURVEY WILL SEE THE QUESTIONS IN THIS GROUP).*

21 **[PDQ1] Have you ever attended any Reading Apprenticeship training?**

Please choose **only one** of the following:

- O Yes
- O No

22 **[PDQ2] Did you attend any Reading Apprenticeship training prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ1 above]

Please choose **only one** of the following:

- O Yes
- O No

23 **[PDQ3] During which year(s), prior to the summer of 2016, did you attend Reading Apprenticeship training?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please choose **all** that apply:

- O Winter and/or spring of 2016
- O 2015
- O 2014
- O 2013
- O Prior to 2013

24 **[PDQ4] Approximately how many days of Reading Apprenticeship training did you attend, in total, prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please write your answer here: (only numbers may be entered in this field)

10

PROFESSIONAL LEARNING - TREATMENT GROUP ONLY

The following questions ask you about RAAD Professional Learning Communities (PLCs), a monthly, online learning group of teachers participating in Reading Apprenticeship Across the Disciplines.

25 **[PDQ5] Have you attended any of the PLC online learning group meetings since the beginning of the 2016-17 school year?**

Please choose **only one** of the following:

- O Yes
- O No

26 **[PDQ6] If you missed any of the PLC meetings since the beginning of the 2016-17 school year, what were your primary reasons for not attending?**

[Skip pattern- respondents will only see this question if they answer NO to PD57 above]

Please choose **all** that apply:

- O I had other obligation(s) at that time
- O I was not interested
- O I had technical problems connecting/logging into the online PLC meeting.
- O I didn't know when the PLC meeting(s) were offered
- O Other:_____

27 **[PDQ7] To what extent do you agree with the following statements about the PLC meeting(s) you attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ5 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The PLC makes me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
d. Hearing my colleagues share their approaches and challenges informed my own practice.	O	O	O	O	O
e. I felt supported by the PLC facilitator.	O	O	O	O	O
f. I got the information I needed from the PLC facilitator.	O	O	O	O	O
g. The PLC caused me to reflect on my own practices.	O	O	O	O	O

28 **[PDQ8] How helpful were the PLC meetings you attended for implementing RAAD strategies in your classroom?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ5 above]

Please choose **only one** of the following:

- O Not at all helpful
- O Less than moderately helpful
- O Moderately helpful
- O More than moderately helpful
- O Very helpful

The following questions ask you about the Reading Apprenticeship Across the Disciplines Monthly Site-based School Team Meetings.

29 **[PDQ9] Have you attended any RAAD site-based school team meetings at your school since the beginning of the 2016-17 school year?**

Please choose **only one** of the following:

- O Yes
- O No

30 **[PDQ10] If you missed any RAAD site-based school team meetings since the beginning of the 2016-17 school year, what was your primary reason for not attending?**

[Skip pattern- respondents will only see this question if they answer NO to PDQ9 above]

Please choose **only one** of the following:

- O I had other obligation(s) at that time
- O I was not interested

- O I didn't know when the team meeting(s) were offered
- O Other:_____

31 **[PDQ11] To what extent do you agree with the following statements about the RAAD site-based school team meeting(s) you have attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The school school team meetings make me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O
d. Hearing my colleagues share their approaches and challenges has informed my own practice.	O	O	O	O	O
e. The school team meetings have caused me to reflect on my own practices.	O	O	O	O	O

32 **[PDQ12] How helpful were the RAAD site-based school team meetings you attended for implementing Reading Apprenticeship strategies in your classroom?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please choose **only one** of the following:

- O Not at all helpful
- O Less than moderately helpful
- O Moderately helpful
- O More than moderately helpful
- O Very helpful

33 **[PDQ13] What challenges have you faced in implementing Reading Apprenticeship? [Check all that apply.]**

- ☐ Lack of materials
- ☐ Lack of parent support
- ☐ Lack of administrative support
- ☐ Too much work to implement
- ☐ Competing priorities

- ☐ Student behavior
- ☐ Student ability
- ☐ Lack of understanding of how to implement Reading Apprenticeship in my class
- ☐ Not enough training in Reading Apprenticeship
- ☐ None
- ☐ Other_____

34 **[PDQ14] Are there any school district policy constraints that make the implementation of Reading Apprenticeship difficult?**

- ☐ Yes
- ☐ No

If "Yes," please describe:

35 **[PDQ16] To what extent do you agree with the following statements?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Reading Apprenticeship is aligned with the goals of my classroom	O	O	O	O	O
b. Reading Apprenticeship is aligned with the content standards of my classroom	O	O	O	O	O

36 **[PDQ17] Please explain your responses regarding the alignment of Reading Apprenticeship with the goals and content standards of your classroom.**

Please write your answer here:

37 **[PDQ15] Please share any comments/questions you have about the Reading Apprenticeship approach.**

Please write your answer here:

CLOSING QUESTIONS - TREATMENT AND CONTROL GROUP

38 **[GENQ1] Please share any comments/questions about this research project in general.**

Please write your answer here:

39 **[GENQ2] Please comment on any problems you had with this survey or any suggestions you have for improving it.**

Please write your answer here:

RAAD Evaluation Teacher Survey 3 (Spring 2017)

Thank you for participating in the Reading Apprenticeship Across the Disciplines (RAAD) project. This survey will ask you about teaching practices you use in one of your classes (we will refer to this as your "target class") and related events or professional development you attend as part of the project.

The information you provide in this survey is being collected for research purposes only and will be kept strictly confidential. Responses will only be reported in aggregate. No individual names or schools will be reported.

Please note:

Do not click the "Submit" button until you are satisfied with your responses. While taking this survey, if you wish to go back and review previous responses, you may do so by clicking the "previous" button at the bottom of the screen. However, once you click "submit" at the end of the survey, you will not be able to go back and change your responses.

This survey should take approximately 20 minutes to complete.

If you encounter any problems, please contact Katie Allen at kallen@impaqint.com or 443.259.5270.

DEMOGRAPHICS *(ONLY TEACHERS WHO DID NOT RESPOND IN PRIOR SURVEYS WILL SEE THE QUESTIONS IN THIS GROUP)*

1 **[DEMOG_Q1] Prior to the 2016-17 school year, how many years have you been at least a half time classroom teacher?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

2 **[DEMOG_Q2] Prior to the 2016-17 school year, how many years have you taught {SUBJECT} at least half time?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

3 **DEMOG_Q3] What is the highest level of education you have completed?**

Please choose **only one** of the following:

- O Bachelor's
- O Master's
- O Educational Specialist or professional diploma
- O Doctorate
- O Other:_____

4 **[DEMOG_Q4] Do you have a certification as a reading or literacy specialist?**

Please choose **only one** of the following:

- O Yes
- O No

5 **[DEMOG_Q5] What is your gender?**

Please choose **only one** of the following:

- O Female
- O Male

6 **[DEMOG_Q6] What is your ethnicity?**

Please choose **all** that apply:

- O African-American
- O American Indian/Alaskan Native

- O Asian
- O Hawaiian/Pacific Islander
- O Hispanic
- O White
- O Other:_____

7 **[DEMOG_Q7] Please indicate the type of schedule your school follows:**

Please choose **only one** of the following:

- O Semester
- O Trimester
- O Quarter
- O Other:_____

PRACTICE QUESTIONS *(ALL TEACHERS WILL SEE THE QUESTIONS IN THIS GROUP)*
CONSTRUCT: READING OPPORTUNITIES: TEXTS (*New Items*, Substitute for Q.4 in NSF survey)
The following questions ask about your and your students' activities in the target class DURING THE PAST FOUR WEEKS.

8 **[PRACQ1] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide supplementary materials to extend the range of texts students read in your subject area	O	O	O	O	O
b. Provide supplementary materials to engage students in reading about subject-area topics	O	O	O	O	O
c. Provide a variety of reading materials based on students' knowledge and experiences	O	O	O	O	O
d. Provide supplementary materials to add contrasting perspectives or ideas	O	O	O	O	O
e. Select particular excerpts from course texts to focus student attention on subject-area reading skills	O	O	O	O	O

CONSTRUCT: READING OPPORTUNITIES: LEARNING STRUCTURE (NSF Q8)

9 **[PRACQ2] During the past four weeks, how often did your STUDENTS engage in the following reading-related activities in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Begin reading for homework assignment in class	O	O	O	O	O
b. Read assigned materials silently in class	O	O	O	O	O
c. Read self-selected material in class	O	O	O	O	O
d. (-) Take turns reading aloud in whole-class setting	O	O	O	O	O
e. (-) Listen to teacher read aloud in whole-class setting	O	O	O	O	O
CONSTRUCT: CONTENT	O	O	O	O	O
f. (-) Listen and take notes on teacher lecture on the content of reading materials in whole-class setting	O	O	O	O	O
g. Discuss the meaning of reading materials with partners or small groups	O	O	O	O	O

CONSTRUCT: CONTENT (NSF Q 8, 9, 12, 19)

10 **[PRACQ3] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Discuss homework reading assignments in a teacher-facilitated, whole-class setting	O	O	O	O	O
b. (-) Present the important information from a reading assignment verbally to make sure everyone gets it	O	O	O	O	O
c. Discuss the content of assigned reading materials in a whole class setting	O	O	O	O	O
d. (-) Give a lecture to present subject-area content to the class	O	O	O	O	O

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
e. Encourage students to make sense of the content of reading materials rather than relying on you to explain them	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: TEACHER MODELING, GUIDANCE, SUPPORT (NSF Q 17 & 19)

13. [PRACQ4] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Encourage students to work together to answer their own questions about the reading	O	O	O	O	O
b. Provide explicit instruction on behaviors that promote student-to-student talk (e.g., how to listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O
c. Model behaviors that foster productive student-to-student talk (e.g., listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O
d. (-) Use student group work time to catch up on teaching related tasks, such as lesson planning and grading.	O	O	O	O	O
e. Support conversational routines to promote student-to-student talk (e.g., think-pair-share)	O	O	O	O	O
f. Join small groups to model and facilitate group conversation and thinking during group work	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: STUDENT PRACTICE (NSF Q 16 & 17)

14. [PRACQ5] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Work in mixed ability groups	O	O	O	O	O

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
b. Share individual or small group thinking with the whole class	O	O	O	O	O
c. Reflect on how to work together more effectively and productively	O	O	O	O	O
d. Critique and challenge one another's ideas or work	O	O	O	O	O
e. Explain concepts to one another	O	O	O	O	O
f. Read and respond to one another's work	O	O	O	O	O

CONSTRUCT: METACOGNITIVE INQUIRY: TEACHER MODELING, GUIDANCE, SUPPORT (NSF Q 9, 11, 12)

15. [PRACQ6] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Share your own interest in reading in your subject area with students	O	O	O	O	O
b. Preview long or challenging texts to identify strategies for dealing with them	O	O	O	O	O
c. Demonstrate that reading academic materials is difficult for everyone—including yourself	O	O	O	O	O
d. Think aloud to model your own confusions and efforts to make sense of subject-area reading materials	O	O	O	O	O
e. Pose questions designed to probe and deepen student thinking about reading and thinking processes	O	O	O	O	O
f. Discuss confusions and ways to make sense of reading materials in a whole class, teacher-supported setting	O	O	O	O	O

CONSTRUCT: METACOGNTIVE INQUIRY: STUDENT PRACTICE (NSF Q 10 & 12)

16. [PRACQ7] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Discuss what was helpful or challenging about reading subject-area materials	O	O	O	O	O
b. Think aloud while reading subject-area materials	O	O	O	O	O
c. Take notes focused on how they are making sense of reading materials	O	O	O	O	O
d. Discuss confusions and ways to make sense of reading materials with partners or small groups	O	O	O	O	O
e. Write comments on the text to support sense-making	O	O	O	O	O
f. Share and discuss text annotations with partners or small groups	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: TEACHER MODELING, GUIDANCE, SUPPORT (NSF Q 14)

17. [PRACQ8] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Provide explicit instruction in reading comprehension strategies	O	O	O	O	O
b. Model the use of various reading comprehension strategies	O	O	O	O	O
c. Provide ongoing support to students as they practice comprehension strategies with subject-area reading materials	O	O	O	O	O
d. Monitor student use of comprehension strategies and re-teach as needed	O	O	O	O	O
e. Teach students how to set a reading purpose	O	O	O	O	O

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
f. Demonstrate how to break up and make sense of complex sentences in reading materials	O	O	O	O	O
g. Teach students how to clarify the meaning of subject-area materials	O	O	O	O	O
h. Teach students how to ask and answer questions while reading	O	O	O	O	O
i. Show students how to use context to define unfamiliar vocabulary in course materials	O	O	O	O	O
j. Ask students for evidence from reading materials to support their ideas and conjectures	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: STUDENT PRACTICE (NSF Q 12 & 13)

18. [PRACQ9] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Make connections with prior knowledge and experiences	O	O	O	O	O
b. Clarify the meaning of subject-area materials they read	O	O	O	O	O
c. Ask their own questions to focus their reading	O	O	O	O	O
d. Draw inferences about the content of reading materials	O	O	O	O	O
e. Generate their own inquiry or thematic questions from the reading materials	O	O	O	O	O
f. Interpret figures, models, graphs or illustrations in reading materials	O	O	O	O	O
g. Use context to define unfamiliar words while reading	O	O	O	O	O

CONSTRUCT: NEGOTIATING SUCCESS: INSTRUCTION AND ASSESSMENT (NSF Q 9, 14, 18; NSF Q 16, *new item)*

19. [PRACQ10] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide a variety of subject-area reading materials based on students' reading levels	O	O	O	O	O
b. Read materials you assign to students ahead of time to identify potential challenges and learning opportunities	O	O	O	O	O
c. Modify instruction based on assessment of students' comprehension of reading materials (e.g., add or reduce support)	O	O	O	O	O
d. Provide extra support for struggling readers	O	O	O	O	O
e. Allow students to work at their own pace	O	O	O	O	O
f. Mentor individuals or small groups during class time	O	O	O	O	O
g. Read and comment on reflections students have written (e.g., in their journals)	O	O	O	O	O
h. Listen in as students work with partners or small groups	O	O	O	O	O

ATTITUDE – TR

20 **[ATTQ1-2] Please rate your level of confidence in your ability to do the following:**
Please choose the appropriate response for each item:

	Very Low	Low	Moderate	High	Very High
a. Provide opportunities for reading a variety of texts of different types/genres	O	O	O	O	O
b. Teach students to articulate their own thinking about texts	O	O	O	O	O
c. Structure lessons so that students have to do the assigned reading in order to be successful	O	O	O	O	O
d. Support students in their attempts to understand disciplinary text (e.g., challenging literature, textbooks, primary documents, scientific articles)	O	O	O	O	O

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	Very Low	Low	Moderate	High	Very High
e. Provide explicit instruction around reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O
f. Model/demonstrate reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O
g. Support students in working on reading activities in groups (small groups or whole class), (i.e., setting norms, creating safety, providing prompts that promote collaboration, and providing guidance/feedback)	O	O	O	O	O
h. Give students roles that make them responsible for making sense of texts (e.g., asking students to lead discussions or make arguments based on their interpretations of texts)	O	O	O	O	O
i. Facilitate students' active engagement in learning through the use of inquiry-based instructional methods (i.e., where students learn by questioning and problem-solving)	O	O	O	O	O
j. Ask students to pose questions about and raise problems with course readings	O	O	O	O	O
k. Employ routines or assignments that are open-ended (e.g., group discussion; free choice in reading materials) so that all students feel comfortable participating and can have some measure of success)	O	O	O	O	O

PROFESSIONAL LEARNING - *(ONLY TEACHERS WHO DID NOT RESPOND IN PRIOR SURVEYS WILL SEE THE QUESTIONS IN THIS GROUP)*

21 **[PDQ1] Have you ever attended any Reading Apprenticeship training?**

Please choose **only one** of the following:

O Yes
O No

22 **[PDQ2] Did you attend any Reading Apprenticeship training prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ1 above]

Please choose **only one** of the following:

O Yes
O No

23 **[PDQ3] During which year(s), prior to the summer of 2016, did you attend Reading Apprenticeship training?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please choose **all** that apply:

- O Winter and/or spring of 2016
- O 2015
- O 2014
- O 2013
- O Prior to 2013

24 **[PDQ4] Approximately how many days of Reading Apprenticeship training did you attend, in total, prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please write your answer here: (only numbers may be entered in this field)

PROFESSIONAL LEARNING - TREATMENT GROUP ONLY

The following questions ask you about RAAD Professional Learning Communities (PLCs), a monthly, online learning group of teachers participating in Reading Apprenticeship Across the Disciplines.

25 **[PDQ5] Have you attended any of the online PLC meetings since the beginning of the 2016-17 school year?**

Please choose **only one** of the following:

- O Yes
- O No

26 **[PDQ6] If you missed any of the online PLC meetings since the beginning of the 2016-17 school year, what were your primary reasons for not attending?**

[Skip pattern- respondents will only see this question if they answer NO to PD57 above]

Please choose **all** that apply:

- O I had other obligation(s) at that time
- O I was not interested
- O I had technical problems connecting/logging into the online PLC meeting.
- O I didn't know when the PLC meeting(s) were offered
- O Other:_____

27 **[PDQ7] To what extent do you agree with the following statements about the online PLC meeting(s) you attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ5 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The PLC makes me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O
d. Hearing my colleagues share their approaches and challenges informed my own practice.	O	O	O	O	O
e. I felt supported by the PLC facilitator.	O	O	O	O	O
f. I got the information I needed from the PLC facilitator.	O	O	O	O	O
g. The PLC caused me to reflect on my own practices.	O	O	O	O	O

28 **[PDQ8] How helpful were the online PLC meetings you attended for implementing RAAD strategies in your classroom?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ5 above]

Please choose **only one** of the following:

- O Not at all helpful
- O Less than moderately helpful
- O Moderately helpful
- O More than moderately helpful
- O Very helpful

The following questions ask you about the Reading Apprenticeship Across the Disciplines Monthly Site-based School Team Meetings.

29 **[PDQ9] Have you attended any RAAD site-based school team meetings at your school since the beginning of the 2016-17 school year?**

Please choose **only one** of the following:

- O Yes
- O No

30 **[PDQ10] If you missed any RAAD site-based school team meetings since the beginning of the 2016-17 school year, what was your primary reason for not attending?**

[Skip pattern- respondents will only see this question if they answer NO to PDQ9 above]

Please choose **only one** of the following:

- O I had other obligation(s) at that time
- O I was not interested
- O I didn't know when the team meeting(s) were offered
- O Other:_____

31 **[PDQ11] To what extent do you agree with the following statements about the RAAD site-based school team meeting(s) you have attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The school team meetings make me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O
d. Hearing my colleagues share their approaches and challenges has informed my own practice.	O	O	O	O	O
e. The school team meetings have caused me to reflect on my own practices.	O	O	O	O	O

32 **[PDQ12] How helpful were the RAAD site-based school team meetings you attended for implementing Reading Apprenticeship strategies in your classroom?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please choose **only one** of the following:

- O Not at all helpful
- O Less than moderately helpful
- O Moderately helpful
- O More than moderately helpful
- O Very helpful

33 **[PDQ13] What challenges have you faced in implementing Reading Apprenticeship? [Check all that apply.]**

- ☐ Lack of materials
- ☐ Lack of parent support
- ☐ Lack of administrative support
- ☐ Too much work to implement
- ☐ Competing priorities
- ☐ Student behavior
- ☐ Student ability
- ☐ Lack of understanding of how to implement Reading Apprenticeship in my class
- ☐ Not enough training in Reading Apprenticeship
- ☐ None
- ☐ Other_____

34 **[PDQ14] Are there any school district policy constraints that make the implementation of Reading Apprenticeship difficult?**

- ☐ Yes
- ☐ No

If "Yes," please describe:

35 **[PDQ18] Please indicate the extent to which you agree or disagree with the following statements:** *The leadership at my school...*

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. ... supports my participation in RAAD.	O	O	O	O	O
b. ... provides me with feedback on my literacy instruction.	O	O	O	O	O
c. ... expresses concern that my participation in RAAD is taking time away from other instructional priorities.	O	O	O	O	O
d. ... has attended some of the RAAD PD.	O	O	O	O	O

36 **[PDQ15] Please share any comments/questions you have about the Reading Apprenticeship approach.**

Please write your answer here:

CLOSING QUESTIONS - TREATMENT AND CONTROL GROUP

37 **[GENQ1] Please share any comments/questions about this research project in general.**

Please write your answer here:

38 **[GENQ2] Please comment on any problems you had with this survey or any suggestions you have for improving it.**

Please write your answer here:

RAAD Evaluation Teacher Survey 4 (Fall 2017)

Thank you for participating in the Reading Apprenticeship Across the Disciplines (RAAD) project. This survey will ask you about teaching practices you use in one of your classes (we will refer to this as your "target class") and related events or professional development you attend as part of the project.

The information you provide in this survey is being collected for research purposes only and will be kept strictly confidential. Responses will only be reported in aggregate. No individual names or schools will be reported.

Please note:

Do not click the "Submit" button until you are satisfied with your responses. While taking this survey, if you wish to go back and review previous responses, you may do so by clicking the "previous" button at the bottom of the screen. However, once you click "submit" at the end of the survey, you will not be able to go back and change your responses.

This survey should take approximately 20 minutes to complete.

If you encounter any problems, please contact Katie Allen at kallen@impaqint.com or 443.259.5270.

DEMOGRAPHICS *(ONLY TEACHERS WHO DID NOT RESPOND IN PRIOR SURVEYS WILL SEE THE QUESTIONS IN THIS GROUP)*

1 **[DEMOG_Q1] Prior to the 2017-18 school year, how many years have you been at least a half time classroom teacher?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

2 **[DEMOG_Q2] Prior to the 2017-18 school year, how many years have you taught {SUBJECT} at least half time?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

3 **DEMOG_Q3] What is the highest level of education you have completed?**

Please choose **only one** of the following:

- O Bachelor's
- O Master's
- O Educational specialist or professional diploma
- O Doctorate
- O Other:_____

4 **[DEMOG_Q4] Do you have a certification as a reading or literacy specialist?**

Please choose **only one** of the following:

- O Yes
- O No

5 **[DEMOG_Q5] What is your gender?**

Please choose **only one** of the following:

- O Female
- O Male

6 **[DEMOG_Q6] What is your ethnicity?**

Please choose **all** that apply:

- O Black or African-American
- O American Indian/Alaskan Native

- O Asian
- O Hawaiian/Pacific Islander
- O Hispanic or Latino
- O White
- O Other:_____

7 **[DEMOG_Q7] Please indicate the type of schedule your school follows:**

Please choose **only one** of the following:

- O Semester
- O Trimester
- O Quarter
- O Other:_____

PRACTICE QUESTIONS *(ALL TEACHERS WILL SEE THE QUESTIONS IN THIS GROUP)*
CONSTRUCT: READING OPPORTUNITIES: TEXTS
The following questions ask about your and your students' activities in the target class DURING THE PAST FOUR WEEKS.

8 **[PRACQ1] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide supplementary materials to extend the range of texts students read in your subject area	O	O	O	O	O
b. Provide supplementary materials to engage students in reading about subject-area topics	O	O	O	O	O
c. Provide a variety of reading materials based on students' knowledge and experiences	O	O	O	O	O
d. Provide supplementary materials to add contrasting perspectives or ideas	O	O	O	O	O
e. Select particular excerpts from course texts to focus student attention on subject-area reading skills	O	O	O	O	O

CONSTRUCT: READING OPPORTUNITIES: LEARNING STRUCTURE

9 **[PRACQ2] During the past four weeks, how often did your STUDENTS engage in the following reading-related activities in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Begin reading for homework assignment in class	O	O	O	O	O
b. Read assigned materials silently in class	O	O	O	O	O
c. Read self-selected material in class	O	O	O	O	O
d. (-) Take turns reading aloud in whole-class setting	O	O	O	O	O
e. (-) Listen to teacher read aloud in whole-class setting	O	O	O	O	O
CONSTRUCT: CONTENT	O	O	O	O	O
f. (-) Listen and take notes on teacher lecture on the content of reading materials in whole-class setting	O	O	O	O	O
g. Discuss the meaning of reading materials with partners or small groups	O	O	O	O	O

CONSTRUCT: CONTENT

10 **[PRACQ3] During the past four weeks, how often did YOU do the following in your [target class]?**

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Discuss homework reading assignments in a teacher-facilitated, whole-class setting	O	O	O	O	O
b. (-) Present the important information from a reading assignment verbally to make sure everyone gets it	O	O	O	O	O
c. Discuss the content of assigned reading materials in a whole class setting	O	O	O	O	O
d. (-) Give a lecture to present subject-area content to the class	O	O	O	O	O

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
e. Encourage students to make sense of the content of reading materials rather than relying on you to explain it to them	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: TEACHER MODELING, GUIDANCE, SUPPORT

13. [PRACQ4] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Encourage students to work together to answer their own questions about the reading	O	O	O	O	O
b. Provide explicit instruction on behaviors that promote student-to-student talk (e.g., how to listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O
c. Model behaviors that foster productive student-to-student talk (e.g., listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O
d. Support conversational routines to promote student-to-student talk (e.g., think-pair-share)	O	O	O	O	O
e. Join small groups to model and facilitate group conversation and thinking during group work	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: STUDENT PRACTICE

14. [PRACQ5] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Work in mixed ability groups	O	O	O	O	O
b. Share individual or small group thinking with the whole class	O	O	O	O	O
c. Reflect on how to work together more effectively and productively	O	O	O	O	O

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
d. Critique and challenge one another's ideas or work	O	O	O	O	O
e. Explain concepts to one another	O	O	O	O	O
f. Read and respond to one another's work	O	O	O	O	O

CONSTRUCT: METACOGNITIVE INQUIRY: TEACHER MODELING, GUIDANCE, SUPPORT

15. [PRACQ6] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Share your own interest in reading in your subject area with students	O	O	O	O	O
b. Preview long or challenging texts to identify strategies for dealing with them	O	O	O	O	O
c. Demonstrate that reading academic materials is difficult for everyone—including yourself	O	O	O	O	O
d. Think aloud to model your own confusions and efforts to make sense of subject-area reading materials	O	O	O	O	O
e. Pose questions designed to probe and deepen student thinking about reading and thinking processes	O	O	O	O	O
f. Discuss confusions and ways to make sense of reading materials in a whole class, teacher-supported setting	O	O	O	O	O

CONSTRUCT: METACOGNTIVE INQUIRY: STUDENT PRACTICE

16. [PRACQ7] During the past four weeks, how often did <u>STUDENTS</u> engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Discuss what was helpful or challenging about reading subject-area materials	O	O	O	O	O
b. Think aloud while reading subject-area materials	O	O	O	O	O
c. Take notes focused on how they are making sense of reading materials	O	O	O	O	O
d. Discuss confusions and ways to make sense of reading materials with partners or small groups	O	O	O	O	O
e. Write comments on the text to support sense-making	O	O	O	O	O
f. Share and discuss text annotations with partners or small groups	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: TEACHER MODELING, GUIDANCE, SUPPORT

17. [PRACQ8] During the past four weeks, how often did <u>YOU</u> do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide explicit instruction in reading comprehension strategies	O	O	O	O	O
b. Model the use of various reading comprehension strategies	O	O	O	O	O
c. Provide ongoing support to students as they practice comprehension strategies with subject-area reading materials	O	O	O	O	O
d. Monitor student use of comprehension strategies and re-teach as needed	O	O	O	O	O
e. Teach students how to set a reading purpose	O	O	O	O	O

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
f. Demonstrate how to break up and make sense of complex sentences in reading materials	O	O	O	O	O
g. Teach students how to clarify the meaning of subject-area materials	O	O	O	O	O
h. Teach students how to ask and answer questions while reading	O	O	O	O	O
i. Show students how to use context to define unfamiliar vocabulary in course materials	O	O	O	O	O
j. Ask students for evidence from reading materials to support their ideas and conjectures	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: STUDENT PRACTICE

18. [PRACQ9] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Make connections with prior knowledge and experiences	O	O	O	O	O
b. Clarify the meaning of subject-area materials they read	O	O	O	O	O
c. Ask their own questions to focus their reading	O	O	O	O	O
d. Draw inferences about the content of reading materials	O	O	O	O	O
e. Generate their own inquiry or thematic questions from the reading materials	O	O	O	O	O
f. Interpret figures, models, graphs or illustrations in reading materials	O	O	O	O	O
g. Use context to define unfamiliar words while reading	O	O	O	O	O

CONSTRUCT: NEGOTIATING SUCCESS: INSTRUCTION AND ASSESSMENT

19. [PRACQ10] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide a variety of subject-area reading materials based on students' reading levels	O	O	O	O	O
b. Read materials you assign to students ahead of time to identify potential challenges and learning opportunities	O	O	O	O	O
c. Modify instruction based on assessment of students' comprehension of reading materials (e.g., add or reduce support)	O	O	O	O	O
d. Provide extra support for struggling readers	O	O	O	O	O
e. Allow students to work at their own pace	O	O	O	O	O
f. Mentor individuals or small groups during class time	O	O	O	O	O
g. Read and comment on reflections students have written (e.g., in their journals)	O	O	O	O	O
h. Listen in as students work with partners or small groups	O	O	O	O	O

CONSTRUCT: READING APPRENTICESHIP PRACTICES: TEACHER CONFIDENCE

20 **[ATTQ1-2] Please rate your level of confidence in your ability to do the following:**

Please choose the appropriate response for each item:

	Very Low	Low	Moderate	High	Very High
a. Provide opportunities for reading a variety of texts of different types/genres	O	O	O	O	O
b. Teach students to articulate their own thinking about texts	O	O	O	O	O
c. Structure lessons so that students have to do the assigned reading in order to be successful	O	O	O	O	O
d. Support students in their attempts to understand disciplinary text (e.g., challenging literature, textbooks, primary documents, scientific articles)	O	O	O	O	O
e. Provide explicit instruction around reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O

	Very Low	Low	Moderate	High	Very High
f. Model/demonstrate reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O
g. Support students in working on reading activities in groups (small groups or whole class), (i.e., setting norms, creating safety, providing prompts that promote collaboration, and providing guidance/feedback)	O	O	O	O	O
h. Give students roles that make them responsible for making sense of texts (e.g., asking students to lead discussions or make arguments based on their interpretations of texts)	O	O	O	O	O
i. Facilitate students' active engagement in learning through the use of inquiry-based instructional methods (i.e., where students learn by questioning and problem-solving)	O	O	O	O	O
j. Ask students to pose questions about and raise problems with course readings	O	O	O	O	O
k. Employ routines or assignments that are open-ended (e.g., group discussion; free choice in reading materials) so that all students feel comfortable participating and can have some measure of success	O	O	O	O	O

PROFESSIONAL LEARNING - *(ONLY TEACHERS WHO DID NOT RESPOND IN PRIOR SURVEYS WILL SEE THE QUESTIONS IN THIS GROUP)*

21 **[PDQ1] Have you ever attended any Reading Apprenticeship training?**

Please choose **only one** of the following:

- O Yes
- O No

22 **[PDQ2] Did you attend any Reading Apprenticeship training prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ1 above]

Please choose **only one** of the following:

- O Yes
- O No

23 **[PDQ3] During which year(s), prior to the summer of 2016, did you attend Reading Apprenticeship training?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please choose **all** that apply:

- O Winter and/or spring of 2016
- O 2015
- O 2014
- O 2013
- O Prior to 2013

24 **[PDQ4] Approximately how many days of Reading Apprenticeship training did you attend, in total, prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please write your answer here: (only numbers may be entered in this field)

PROFESSIONAL LEARNING - TREATMENT GROUP ONLY

The following questions ask you about RAAD Professional Learning Communities (PLCs), a monthly, online learning group of teachers participating in Reading Apprenticeship Across the Disciplines.

25 **[PDQ5] Have you attended any of the online PLC meetings since the beginning of the 2017-18 school year?**

Please choose **only one** of the following:

- O Yes
- O No

26 **[PDQ6] If you missed any of the online PLC meetings since the beginning of the 2017-18 school year, what were your primary reasons for not attending?**

Please choose **all** that apply:

- O I had other obligation(s) at that time
- O I was not interested
- O I had technical problems connecting/logging into the online PLC meeting.
- O I didn't know when the PLC meeting(s) were offered
- O Other:_____
- O N/A (attended all PLC meetings since the beginning of the 2017-18 school year)

27 **[PDQ7] To what extent do you agree with the following statements about the online PLC meeting(s) you attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ5 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The PLC makes me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O
d. Hearing my colleagues share their approaches and challenges informed my own practice.	O	O	O	O	O
e. I felt supported by the PLC facilitator.	O	O	O	O	O
f. I got the information I needed from the PLC facilitator.	O	O	O	O	O
g. The PLC caused me to reflect on my own practices.	O	O	O	O	O
h. I got support that helped me persevere with Reading Apprenticeship when the going was rough.	O	O	O	O	O
i. The PLC helped me implement Reading Apprenticeship practices.	O	O	O	O	O

28 **[PDQ8] How helpful were the online PLC meetings you attended for implementing Reading Apprenticeship strategies in your classroom?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ5 above]

Please choose **only one** of the following:

- O Not at all helpful
- O Less than moderately helpful
- O Moderately helpful
- O More than moderately helpful
- O Very helpful

The following questions ask you about the Reading Apprenticeship Across the Disciplines Monthly Site-based School Team Meetings.

29 **[PDQ9] Have you attended any RAAD site-based school team meetings at your school since the beginning of the 2017-18 school year?**

Please choose **only one** of the following:

- O Yes
- O No

30 **[PDQ10] If you missed any RAAD site-based school team meetings since the beginning of the 2017-18 school year, what was your primary reason for not attending?**

Please choose **only one** of the following:

- O I had other obligation(s) at that time
- O I was not interested
- O I didn't know when the team meeting(s) were offered
- O Other:_____
- O N/A (attended all RAAD team meetings since the beginning of the 2017-18 school year)

31 **[PDQ11] To what extent do you agree with the following statements about the RAAD site-based school team meeting(s) you have attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The school team meetings make me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O
d. Hearing my colleagues share their approaches and challenges has informed my own practice.	O	O	O	O	O
e. The school team meetings have caused me to reflect on my own practices.	O	O	O	O	O
f. I got support that helped me persevere with Reading Apprenticeship when the going was rough.	O	O	O	O	O
g. The school team meetings helped me implement Reading Apprenticeship practices.	O	O	O	O	O

32 **[PDQ12] How helpful were the RAAD site-based school team meetings you attended for implementing Reading**

Apprenticeship strategies in your classroom?

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please choose **only one** of the following:

- O Not at all helpful
- O Less than moderately helpful
- O Moderately helpful
- O More than moderately helpful
- O Very helpful

33 **[PDQ13] What challenges have you faced in implementing Reading Apprenticeship? [Check all that apply.]**

- ☐ Lack of materials
- ☐ Lack of parent support
- ☐ Lack of administrative support
- ☐ Too much work to implement
- ☐ Competing priorities:_____
- ☐ Student behavior
- ☐ Student ability
- ☐ Lack of understanding of how to implement Reading Apprenticeship in my class
- ☐ Not enough training in Reading Apprenticeship
- ☐ None
- ☐ Other:_____

34 **[PDQ14] Are there any school district policy constraints that make the implementation of Reading Apprenticeship difficult?**

- ☐ Yes
- ☐ No

If "Yes," please describe:

35 **[PDQ30] How many classes do you teach?**

Please write your answer here: _____

36 **[PDQ31] In how many of these classes are you implementing Reading Apprenticeship strategies?**

Please write your answer here: _____

37 **[PDQ15] Please share any comments/questions you have about the Reading Apprenticeship approach.**

Please write your answer here:

CLOSING QUESTIONS - TREATMENT AND CONTROL GROUP

38 **[GENQ1] Please share any comments/questions about this research project in general.**

Please write your answer here:

39 **[GENQ2] Please comment on any problems you had with this survey or any suggestions you have for improving it.**

Please write your answer here:

RAAD Evaluation Teacher Survey 5 (Spring 2018)

Thank you for participating in the Reading Apprenticeship Across the Disciplines (RAAD) project. This survey will ask you about teaching practices you use in one of your classes (we will refer to this as your "target class") and related events or professional development you attend as part of the project. This is our last teacher survey for this study.

The information you provide in this survey is being collected for research purposes only and will be kept strictly confidential. Responses will only be reported in aggregate. No individual names or schools will be reported.

Please note:

Do not click the "Submit" button until you are satisfied with your responses. While taking this survey, if you wish to go back and review previous responses, you may do so by clicking the "previous" button at the bottom of the screen. However, once you click "submit" at the end of the survey, you will not be able to go back and change your responses.

This survey should take approximately 20 minutes to complete.

If you encounter any problems, please contact Katie Allen at kallen@impaqint.com or 443.259.5270.

DEMOGRAPHICS *(ONLY TEACHERS WHO DID NOT RESPOND IN PRIOR SURVEYS WILL SEE THE QUESTIONS IN THIS GROUP)*

1 **[DEMOG_Q1] Prior to the 2017-18 school year, how many years have you been at least a half time classroom teacher?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

2 **[DEMOG_Q2] Prior to the 2017-18 school year, how many years have you taught {SUBJECT} at least half time?** *(Please enter number of years. If less than 1 year, please enter 0.)*

Please write your answer here: _____

3 **DEMOG_Q3] What is the highest level of education you have completed?**

Please choose **only one** of the following:

- O Bachelor's
- O Master's
- O Educational specialist or professional diploma
- O Doctorate
- O Other:_____

4 **[DEMOG_Q4] Do you have a certification as a reading or literacy specialist?**

Please choose **only one** of the following:

- O Yes
- O No

5 **[DEMOG_Q5] What is your gender?**

Please choose **only one** of the following:

- O Female
- O Male

6 **[DEMOG_Q6] What is your ethnicity?**

Please choose **all** that apply:

- O Black or African-American
- O American Indian/Alaskan Native
- O Asian
- O Hawaiian/Pacific Islander

- O Hispanic or Latino
- O White
- O Other:_____

7 **[DEMOG_Q7] Please indicate the type of schedule your school follows:**

Please choose **only one** of the following:

- O Semester
- O Trimester
- O Quarter
- O Other:_____

PRACTICE QUESTIONS *(ALL TEACHERS WILL SEE THE QUESTIONS IN THIS GROUP)*
CONSTRUCT: READING OPPORTUNITIES: TEXTS
The following questions ask about your and your students' activities in the target class DURING THE PAST FOUR WEEKS.

[PRACQ1] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide supplementary materials to extend the range of texts students read in your subject area	O	O	O	O	O
b. Provide supplementary materials to engage students in reading about subject-area topics	O	O	O	O	O
c. Provide a variety of reading materials based on students' knowledge and experiences	O	O	O	O	O
d. Provide supplementary materials to add contrasting perspectives or ideas	O	O	O	O	O
e. Select particular excerpts from course texts to focus student attention on subject-area reading skills	O	O	O	O	O

CONSTRUCT: READING OPPORTUNITIES: LEARNING STRUCTURE

[PRACQ2] During the past four weeks, how often did your STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Begin reading for homework assignment in class	O	O	O	O	O
b. Read assigned materials silently in class	O	O	O	O	O
c. Read self-selected material in class	O	O	O	O	O
d. (-) Take turns reading aloud in whole-class setting	O	O	O	O	O
e. (-) Listen to teacher read aloud in whole-class setting	O	O	O	O	O
CONSTRUCT: CONTENT	O	O	O	O	O
f. (-) Listen and take notes on teacher lecture on the content of reading materials in whole-class setting	O	O	O	O	O
g. Discuss the meaning of reading materials with partners or small groups	O	O	O	O	O

CONSTRUCT: CONTENT

[PRACQ3] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once a week	2-3 times a week	Daily or almost daily
a. Discuss homework reading assignments in a teacher-facilitated, whole-class setting	O	O	O	O	O
b. (-) Present the important information from a reading assignment verbally to make sure everyone gets it	O	O	O	O	O
c. Discuss the content of assigned reading materials in a whole class setting	O	O	O	O	O
d. (-) Give a lecture to present subject-area content to the class	O	O	O	O	O
e. Encourage students to make sense of the content of reading materials rather than relying on you to explain it to them	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: TEACHER MODELING, GUIDANCE, SUPPORT

13. [PRACQ4] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	*About once a week*	*2-3 times a week*	Daily or almost daily
a. Encourage students to work together to answer their own questions about the reading	O	O	O	O	O
b. Provide explicit instruction on behaviors that promote student-to-student talk (e.g., how to listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O
c. Model behaviors that foster productive student-to-student talk (e.g., listen and respond to peers, civilly challenge and critique others' ideas)	O	O	O	O	O
d. Support conversational routines to promote student-to-student talk (e.g., think-pair-share)	O	O	O	O	O
e. Join small groups to model and facilitate group conversation and thinking during group work	O	O	O	O	O

CONSTRUCT: COLLABORATIVE ACTIVITIES: STUDENT PRACTICE

14. [PRACQ5] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Work in mixed ability groups	O	O	O	O	O
b. Share individual or small group thinking with the whole class	O	O	O	O	O
c. Reflect on how to work together more effectively and productively	O	O	O	O	O
d. Critique and challenge one another's ideas or work	O	O	O	O	O
e. Explain concepts to one another	O	O	O	O	O
f. Read and respond to one another's work	O	O	O	O	O

CONSTRUCT: METACOGNITIVE INQUIRY: TEACHER MODELING, GUIDANCE, SUPPORT

15. [PRACQ6] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Share your own interest in reading in your subject area with students	O	O	O	O	O
b. Preview long or challenging texts to identify strategies for dealing with them	O	O	O	O	O
c. Demonstrate that reading academic materials is difficult for everyone—including yourself	O	O	O	O	O
d. Think aloud to model your own confusions and efforts to make sense of subject-area reading materials	O	O	O	O	O
e. Pose questions designed to probe and deepen student thinking about reading and thinking processes	O	O	O	O	O
f. Discuss confusions and ways to make sense of reading materials in a whole class, teacher-supported setting	O	O	O	O	O

CONSTRUCT: METACOGNTIVE INQUIRY: STUDENT PRACTICE

16. [PRACQ7] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Discuss what was helpful or challenging about reading subject-area materials	O	O	O	O	O
b. Think aloud while reading subject-area materials	O	O	O	O	O
c. Take notes focused on how they are making sense of reading materials	O	O	O	O	O
d. Discuss confusions and ways to make sense of reading materials with partners or small groups	O	O	O	O	O
e. Write comments on the text to support sense-making	O	O	O	O	O
f. Share and discuss text annotations with partners or small groups	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: TEACHER MODELING, GUIDANCE, SUPPORT

17. [PRACQ8] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide explicit instruction in reading comprehension strategies	O	O	O	O	O
b. Model the use of various reading comprehension strategies	O	O	O	O	O
c. Provide ongoing support to students as they practice comprehension strategies with subject-area reading materials	O	O	O	O	O
d. Monitor student use of comprehension strategies and re-teach as needed	O	O	O	O	O
e. Teach students how to set a reading purpose	O	O	O	O	O
f. Demonstrate how to break up and make sense of complex sentences in reading materials	O	O	O	O	O
g. Teach students how to clarify the meaning of subject-area materials	O	O	O	O	O
h. Teach students how to ask and answer questions while reading	O	O	O	O	O
i. Show students how to use context to define unfamiliar vocabulary in course materials	O	O	O	O	O
j. Ask students for evidence from reading materials to support their ideas and conjectures	O	O	O	O	O

CONSTRUCT: SPECIFIC COMPREHENSION STRATEGIES: STUDENT PRACTICE

18. [PRACQ9] During the past four weeks, how often did STUDENTS engage in the following reading-related activities in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Make connections with prior knowledge and experiences	O	O	O	O	O
b. Clarify the meaning of subject-area materials they read	O	O	O	O	O
c. Ask their own questions to focus their reading	O	O	O	O	O
d. Draw inferences about the content of reading materials	O	O	O	O	O
e. Generate their own inquiry or thematic questions from the reading materials	O	O	O	O	O
f. Interpret figures, models, graphs or illustrations in reading materials	O	O	O	O	O
g. Use context to define unfamiliar words while reading	O	O	O	O	O

CONSTRUCT: NEGOTIATING SUCCESS: INSTRUCTION AND ASSESSMENT

19. [PRACQ10] During the past four weeks, how often did YOU do the following in your [target class]?

	Never	1-2 times	About once *a week*	2-3 times *a week*	Daily or almost daily
a. Provide a variety of subject-area reading materials based on students' reading levels	O	O	O	O	O
b. Read materials you assign to students ahead of time to identify potential challenges and learning opportunities	O	O	O	O	O
c. Modify instruction based on assessment of students' comprehension of reading materials (e.g., add or reduce support)	O	O	O	O	O
d. Provide extra support for struggling readers	O	O	O	O	O
e. Allow students to work at their own pace	O	O	O	O	O
f. Mentor individuals or small groups during class time	O	O	O	O	O
g. Read and comment on reflections students have written (e.g., in their journals)	O	O	O	O	O
h. Listen in as students work with partners or small groups	O	O	O	O	O

CONSTRUCT: READING APPRENTICESHIP PRACTICES: TEACHER CONFIDENCE

20 **[ATTQ1-2] Please rate your level of confidence in your ability to do the following:**

Please choose the appropriate response for each item:

	Very Low	Low	Moderate	High	Very High
a. Provide opportunities for reading a variety of texts of different types/genres	O	O	O	O	O
b. Teach students to articulate their own thinking about texts	O	O	O	O	O
c. Structure lessons so that students have to do the assigned reading in order to be successful	O	O	O	O	O
d. Support students in their attempts to understand disciplinary text (e.g., challenging literature, textbooks, primary documents, scientific articles)	O	O	O	O	O
e. Provide explicit instruction around reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O
f. Model/demonstrate reading comprehension strategies (e.g., setting a reading purpose, previewing text, chunking, visualizing)	O	O	O	O	O
g. Support students in working on reading activities in groups (small groups or whole class), (i.e., setting norms, creating safety, providing prompts that promote collaboration, and providing guidance/feedback)	O	O	O	O	O

	Very Low	Low	Moderate	High	Very High
h. Give students roles that make them responsible for making sense of texts (e.g., asking students to lead discussions or make arguments based on their interpretations of texts)	O	O	O	O	O
i. Facilitate students' active engagement in learning through the use of inquiry-based instructional methods (i.e., where students learn by questioning and problem-solving)	O	O	O	O	O
j. Ask students to pose questions about and raise problems with course readings	O	O	O	O	O
k. Employ routines or assignments that are open-ended (e.g., group discussion; free choice in reading materials) so that all students feel comfortable participating and can have some measure of success	O	O	O	O	O

PROFESSIONAL LEARNING - *(ONLY TEACHERS WHO DID NOT RESPOND IN PRIOR SURVEYS WILL SEE THE QUESTIONS IN THIS GROUP)*

21 **[PDQ1] Have you ever attended any Reading Apprenticeship training?**

Please choose **only one** of the following:

O Yes

O No

22 **[PDQ2] Did you attend any Reading Apprenticeship training prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ1 above]

Please choose **only one** of the following:

O Yes

O No

23 **[PDQ3] During which year(s), prior to the summer of 2016, did you attend Reading Apprenticeship training?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please choose **all** that apply:

O Winter and/or spring of 2016

O 2015

O 2014

O 2013

O Prior to 2013

24 **[PDQ4] Approximately how many days of Reading Apprenticeship training did you attend, in total, prior to the summer of 2016?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ2 above]

Please write your answer here: (only numbers may be entered in this field)

PROFESSIONAL LEARNING - TREATMENT GROUP ONLY

The following questions ask you about RAAD Professional Learning Communities (PLCs), a monthly, online learning group of teachers participating in Reading Apprenticeship Across the Disciplines.

25 **[PDQ5] Have you attended any of the online PLC meetings since the beginning of the 2017-18 school year?**

Please choose **only one** of the following:

O Yes

O No

26 **[PDQ6] If you missed any of the online PLC meetings since the beginning of the 2017-18 school year, what was your primary reason for not attending?**

Please choose **only one** of the following:

O I had other obligation(s) at that time

O I was not interested

O I had technical problems connecting/logging into the online PLC meeting.

O I didn't know when the PLC meeting(s) were offered

O Other:_____

O N/A (attended all PLC meetings since the beginning of the 2017-18 school year)

27 **[PDQ7] To what extent do you agree with the following statements about the online PLC meeting(s) you attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ5 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The PLC makes me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O
d. Hearing my colleagues share their approaches and challenges informed my own practice.	O	O	O	O	O
e. I felt supported by the PLC facilitator.	O	O	O	O	O
f. I got the information I needed from the PLC facilitator.	O	O	O	O	O
g. The PLC caused me to reflect on my own practices.	O	O	O	O	O
h. I got support that helped me persevere with Reading Apprenticeship when the going was rough.	O	O	O	O	O
i. The PLC helped me implement Reading Apprenticeship practices.	O	O	O	O	O

28 **[PDQ8] How helpful were the online PLC meetings you attended for implementing Reading Apprenticeship strategies in your classroom?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ5 above]

Please choose **only one** of the following:

O Not at all helpful
O Less than moderately helpful
O Moderately helpful
O More than moderately helpful
O Very helpful

The following questions ask you about the Reading Apprenticeship Across the Disciplines Monthly Site-based School Team Meetings.

29 **[PDQ9] Have you attended any RAAD site-based school team meetings at your school since the beginning of the 2017-18 school year?**

Please choose **only one** of the following:

O Yes
O No

30 **[PDQ32] How many RAAD site-based school team meetings have you attended since the beginning of the 2017-18 school year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please write your answer here: (only numbers may be entered in this field)

31 **[PDQ10] If you missed any RAAD site-based school team meetings since the beginning of the 2017-18 school year, what was your primary reason for not attending?**

Please choose **only one** of the following:

- O I had other obligation(s) at that time
- O I was not interested
- O I didn't know when the team meeting(s) were offered
- O Other:_____
- O N/A (attended all RAAD team meetings since the beginning of the 2017-18 school year)

32 **[PDQ11] To what extent do you agree with the following statements about the RAAD site-based school team meeting(s) you have attended so far this year?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please choose the appropriate response for each item:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The school team meetings make me feel supported by my colleagues.	O	O	O	O	O
b. I was able to learn by sharing my lessons and student work.	O	O	O	O	O
c. I was able to learn by sharing my own challenges to providing instruction.	O	O	O	O	O
d. Hearing my colleagues share their approaches and challenges has informed my own practice.	O	O	O	O	O
e. The school team meetings have caused me to reflect on my own practices.	O	O	O	O	O
f. I got support that helped me persevere with Reading Apprenticeship when the going was rough.	O	O	O	O	O
g. The school team meetings helped me implement Reading Apprenticeship practices.	O	O	O	O	O

33 **[PDQ12] How helpful were the RAAD site-based school team meetings you attended for implementing Reading Apprenticeship strategies in your classroom?**

[Skip pattern- respondents will only see this question if they answer YES to PDQ9 above]

Please choose **only one** of the following:

- O Not at all helpful
- O Less than moderately helpful
- O Moderately helpful
- O More than moderately helpful
- O Very helpful

SUSTAINTABILITY QUESTIONS

34 **[SUSQ1] Do you collaborate informally with colleagues on Reading Apprenticeship implementation?**

Please choose **only one** of the following:

- O Yes
- O No

35 **[SUSQ2] How often do you collaborate informally with colleagues?**

[Skip pattern- respondents will only see this question if they answer YES to SUSQ1 above]

Please choose **only one** of the following:

- O Less than once a month
- O Once a month
- O Twice a month
- O Once a week
- O Twice a week or more

36 **[SUSQ3] What impediments, if any, are you finding with implementing Reading Apprenticeship in your classroom(s)?**

Please write your answer here:

13

37 **[SUSQ4] Has student learning in your class(es) improved as a result of your participation in RAAD?**
Please choose **only one** of the following:

O Yes

O No

If yes, describe some changes or outcomes you have seen in students.

38 **[SUSQ5] Will you continue to use Reading Apprenticeship strategies in your classroom next year?**
Please choose **only one** of the following:

O Yes

O No

39 **[SUSQ6] How likely is it that your school will continue to implement Reading Apprenticeship in the future?**

Please choose **only one** of the following:

O Extremely unlikely

O Unlikely

O Neither likely nor unlikely

O Likely

O Extremely likely

40 **[SUSQ7] What kinds of support do you feel would be most critical to continue implementing Reading Apprenticeship in the future?**

Please write your answer here:

41 **[PDQ15] Please share any comments/questions you have about the Reading Apprenticeship approach.**

Please write your answer here:

CLOSING QUESTIONS - TREATMENT AND CONTROL GROUP

42 **[GENQ1] Please share any comments/questions about this research project in general.**

Please write your answer here:

43 **[GENQ2] Please comment on any problems you had with this survey or any suggestions you have for improving it.**

Please write your answer here:

RAAD Student Survey (To be administered in spring 2017)

INTRODUCTION

Thank you for participating in this survey. Please answer the questions as honestly as you can. The reason that some questions are very similar to others is to help make it really clear what you think. You do not have to answer any questions that you do not want to answer. All of your answers will be kept confidential, and no one at your school will look at your answers.

[Next Page]

The following questions are about what people do when they read academic or school-related materials, such as textbooks or library books. After reading each statement, choose the answer that applies to you. There are no right or wrong answers to these statements.

1. **How true are the following about you:**

   Scale: I never or almost never do this, I do this only occasionally, I sometimes do this, I usually do this, I always or almost always do this

- I have a purpose in mind when I read. [MARSIG_?]
- I take notes while reading to help me understand what I'm reading. [MARSIS_1]
- I think about what I know to help me understand what I'm reading. [MARSIG_1]
- I preview the text to see what it's about before reading it. [MARSIG_2]
- When text becomes difficult, I read aloud to help me understand what I'm reading. [MARSIP_7]
- I write summaries to reflect on key ideas in the text. [MARSIS_2]
- I think about whether the content of the text fits my reading purpose. [MARSIG_11]
- I read slowly but carefully to be sure I understand what I'm reading. [MARSIP_1]
- I discuss what I read with others to check my understanding. [MARSIS_8]
- I skim the text first by noting characteristics like length and organization. [MARSIG_3]

- I try to get back on track when I lose concentration. [MARSIP_9]
- I underline or circle information in the text to help me remember it. [MARSIS_3]
- I adjust my reading speed according to what I'm reading. [MARSIP_8]
- I decide what to read closely and what to ignore. [MARSIG_9]
- I use reference material, such as a dictionary, to help me understand what I'm reading. [MARSIS_7]
- When text becomes difficult, I begin to pay closer attention to what I'm reading. [MARSIP_2]
- I use tables, figures, and pictures in the text to increase my understanding. [MARSIG_4]
- I stop from time to time to think about what I'm reading. [MARSIP_3]
- I use context clues to help me better understand what I'm reading. [MARSIG_5]
- I paraphrase (restate ideas in my own words) to better understand what I'm reading. [MARSIS_4]

- I try to picture or visualize information to help me remember what I'm reading. [MARSIP_4]
- I use typographical aids like boldface and italics to identify key information. [MARSIG_6]
- I critically analyze and evaluate the information presented in the text. [MARSIG_10]
- I go back and forth in the text to find relationships among ideas in it. [MARSIS_5]
- I check my understanding when I come across conflicting information. [MARSIG_7]
- I try to guess what the material is about when reading. [MARSIG_8]

- When the text becomes difficult, I reread to increase my understanding. [MARSIP_5]
- I ask myself questions I like to have answered in the text. [MARSIS_6]
- I check to see whether my guesses about the text are right or wrong. [MARSIG_12]
- I try to guess the meaning of unknown words or phrases. [MARSIP_6]

SUBJECT QUESTIONS

While answering the rest of the questions on this survey, it is important that you think about your learning in this teacher's class for this class period only.

2. **How true are the following in this class:**

   Scale: Not at all true, A little true, Somewhat true, Mostly true, Completely true

   - Most of my classmates encourage each other to work hard in this class. [BELS, CBEL_1]
   - Students feel comfortable actively participating in this class. [BELS, CBEL_2]
   - My teacher gives us lots of opportunities to work with each other. [BELS, CBEL_3]
   - My teacher makes sure that students get to know each other. [BELS, CBEL_4]
   - The teacher puts effort into making sure this class is a welcoming place for everyone. [BELS, CBEL_5]

   - I don't participate in class discussion because I am afraid I will sound stupid. [BELS, PEAV_1]
   - I would rather do easy work that I can do well than challenging work where I might learn more. [BELS, PEAV_2]
   - I don't ask questions in class because I don't want people to think I'm dumb. [BELS, PEAV_3]
   - I stop doing work if I feel like I can't do it well. [BELS, PEAV_4]
   - I only volunteer to answer a question in this class if I know my answer is right. [BELS, PEAV_5]

3. **How confident are you about the following in this class:**

   Scale: Not at all confident, A little confident, Somewhat confident, Mostly confident, Completely confident

   - I can earn an A in this class. [BELS, SEFF_1]
   - I can do well on tests, even when they're difficult. [BELS, SEFF_2]
   - I can master the hardest topics in this class. [BELS, SEFF_3]
   - I can meet all the learning goals my teacher sets. [BELS, SEFF_5]
   - I can do well on future assignments in this class. [BELS, SEFF_4]

4. **In this class, how often do you:**

   Scale: Never, Once in a while, About half the time, Most of the time, Always

   - Do the readings or other assigned work to prepare for class. [BELS, APAS_1]
   - Turn in assignments on the due date. [BELS, APAS_2]
   - Actively participate in class. [BELS, APAS_3]
   - Have all of your class materials with you. [BELS, APAS_4]
   - Do more than what is expected of you. [BELS, APAS_5]
   - Spend extra time outside of class to make sure you are well-prepared for each lesson. [BELS, APAS_6]

5. **How often have <u>you</u> done each of the following in this class:**

   Scale: Never, Sometimes, Often, Very Often

   - Tried to really understand reading assignments in this class. [OTL, EFFORT_2]
   - Felt motivated to work harder than usual on reading assignments. [OTL, EFFORT_3]
   - Wanted to do a good job on reading assignments. [OTL, EFFORT_4]
   - Became really interested in the reading assigned. [OTL, EFFORT_5]
   - Enjoyed completing a reading assignment or task that required a lot of thinking and mental effort. [OTL, EFFORT_6]
   - Put forth a great deal of effort when doing your reading for this class. [OTL, EFFORT_7]
   - Chose to read more about a subject that you learned about in this class. [RAWC,READID_8]
   - Tried to learn more on your own about something you learned about in this class. [RAWC,READID_9]

6. **About how many pages a day do you have to read in school for this class? [NAEP, PAGERD_1]**

   - 5 or fewer
   - 6-10
   - 11-15
   - 16-20
   - More than 20

7. **About how many pages a day do you have to read for homework for this class? [NAEP, PAGERD_2]**

   - 5 or fewer
   - 6-10
   - 11-15
   - 16-20
   - More than 20

8. **How much does your class include each of the following:**

   Scale: None, Very little, Some, A lot

   - Learning from one another's different ways of reading and thinking. [COLLAB_1, OTL]
   - Working together to figure out the meaning of the readings. [COLLAB_2, OTL]
   - Listening and responding to one another's ideas. [COLLAB_3, OTL]

9. **How often have <u>you and your classmates</u> done each of the following in this class:**

   Scale: Never, Sometimes, Often, Very Often

   - Worked with partners or groups on reading assignments in class. [COLLAB_5, OTL]
   - Figured out vocabulary in reading materials. [OTL, COMP_1]
   - Asked questions about something you have read. [OTL, COMP_2]
   - Shared difficulties and ways you solved reading comprehension problems. [OTL, METACOG_1]
   - Made notes about thoughts or questions you had about the text you were reading. [OTL, METIN_5]

- Talked about what you liked or didn't like about a reading [OTL, METIN_8]
- Talked about how you interpreted something you read. [OTL, METIN_10]
- Talked about what was helpful or challenging in reading materials. [RAAD_METACOG_5]

- Thought aloud while reading. [RAAD, METACOG_6]
- Discussed the notes you made about what you read with classmates. [RAAD, METACOG_7]
- Spent class time reading. [OTL, TIMERD_1]
- Read texts other than the textbook. [RAAD, VARMAT_1]
- Read visual texts like photographs, cartoons, illustrations, or posters. [RAAD, VARMAT_2]
- Read information displayed in charts, graphs, or tables. [RAAD, VARMAT_3]
- Read texts from the internet. [RAAD, VARMAT_4]
- Read documents like legal papers, newspapers, or magazine or journal articles. [RAAD, VARMAT_5]

10. How much has your experience in this class helped you in the following areas:

Scale: Very little, Some, Quite a bit, Very much

- Be a more serious student. [OTL, STUDID_1]
- Think about your future educational goals. [OTL, STUDID_2]
- Think of yourself as a capable student. [OTL, STUDID_3]
- Feel like you can succeed in more challenging classes. [OTL, STUDID_4]
- See your education as important. [OTL, STUDID_5]
- Make you interested in taking more classes. [OTL, STUDID_6]

- Understand yourself better as a reader and learner. [OTL, READID_1]
- Make you curious to read about other things. [OTL, READID_2]
- See yourself as a reader. [OTL, READID_3]
- Be willing to tackle challenging reading materials. [OTL, READID_4]
- Feel more confident that you can read in this subject area. [OTL, READID_5]
- Understand materials better when you read. [OTL, READID_6]
- Make connections between what you read and your personal experiences. [OTL, READID_7]

11. How much has your reading in this class helped you in the following areas:

Scale: Very little, Some, Quite a bit, Very much

- Learn the subject of this class. [OTL, INTEG_1]
- Understand concepts taught in this class. [OTL, INTEG_2]
- Feel like you can be more successful reading in other classes. [OTL, INTEG_3]
- Feel more positive about reading in this subject. [OTL, INTEG_4]
- Have a more positive attitude about reading in general. [OTL, INTEG_5]
- Feel like this subject is important. [OTL, INTEG_6]

TEACHER QUESTIONS

The following questions are about your teacher in this class.

12. How often has your teacher done each of the following in this class:

Scale: Never, Sometimes, Often, Very often

- Encouraged students to borrow one another's ideas. [COLLAB_4, OTL]
- Shared his or her own interest in reading in your subject area with the class. [RAAD, METACOG_8]
- Shared his or her own confusions and efforts to make sense of reading materials by thinking aloud. [RAAD, METACOG_9]
- Asked you to explain how you made sense of what you read. [RAAD, METACOG_10]
- Discussed confusions and ways to make sense of reading materials with the whole class. [RAAD, METACOG_11]
- Taught ways to make reading interesting and motivating for students. [OTL, ENGAGIN_1]

13. How true are the following statements about this class:

Scale: Not at all true, A little true, Somewhat true, Mostly true, Completely true

- My teacher helps us connect what we are learning to real life. [BELS, CREL_1]
- My teacher explains how we can use what are learning in our future. [BELS, CREL_2]
- My teachers asks for our input about what we want to learn. [BELS, CREL_3]
- My teacher makes what we are learning really interesting. [BELS, CREL_4]
- My teacher lets us design our own projects or assignments. [BELS, CREL_5]
- My teacher helps me pursue questions that are important to me. [BELS, CREL_6]
- My teacher motivates us to become experts in the topics we are learning about. [BELS, CREL_7]

SCHOOL GENERAL

The following questions are about your beliefs about school and learning in general.

14. How true are the following about you:

Scale: Not at all true, A little true, Somewhat true, Mostly true, Completely true

- My intelligence is something that I can't change very much. [BELS, TOI_1]
- Challenging myself won't make me any smarter. [BELS, TOI_2]
- There are some things I am not capable of learning. [BELS, TOI_3]
- If I am not naturally smart in a subject, I will never do well in it. [BELS, TOI_4]
- I can learn new things in class, but that won't change how good I am at this subject. [BELS, TOI_5]

THANK YOU

Thank you for taking the time to complete the survey. Please remember to hit "submit" to record your answers.

RAAD Student Survey

Info included in tear-off label or page:

School:

Teacher:

Course Name: Grade: Section#:

STUDENT NAME:

pg. 1

Student Perceptions, Attitudes and Behaviors Survey

INTRODUCTION

Thank you for participating in this survey. Please answer the questions as honestly as you can. The reason that some questions are very similar to others is to help make it really clear what you think. You do not have to answer any questions that you do not want to answer. All of your answers will be kept confidential, and no one at your school will look at your answers.

The following questions are about what people do when they read academic or school-related materials, such as textbooks or library books. After reading each statement, choose the answer that applies to you. There are no right or wrong answers to these statements.

1) How true are the following about you:	I never or almost never do this	I do this only occasionally	I sometimes do this	I usually do this	I always or almost always do this
I have a purpose in mind when I read.	①	②	③	④	⑤
I take notes while reading to help me understand what I'm reading.	①	②	③	④	⑤
I think about what I know to help me understand what I'm reading.	①	②	③	④	⑤
I preview the text to see what it's about before reading it.	①	②	③	④	⑤
When text becomes difficult, I read aloud to help me understand what I'm reading.	①	②	③	④	⑤
I write summaries to reflect on key ideas in the text.	①	②	③	④	⑤
I think about whether the content of the text fits my reading purpose.	①	②	③	④	⑤
I read slowly but carefully to be sure I understand what I'm reading.	①	②	③	④	⑤
I discuss what I read with others to check my understanding.	①	②	③	④	⑤
I skim the text first by noting characteristics like length and organization.	①	②	③	④	⑤
I try to get back on track when I lose concentration.	①	②	③	④	⑤
I underline or circle information in the text to help me remember it.	①	②	③	④	⑤
I adjust my reading speed according to what I'm reading.	①	②	③	④	⑤
I decide what to read closely and what to ignore.	①	②	③	④	⑤
I use reference material, such as a dictionary, to help me understand what I'm reading.	①	②	③	④	⑤
When text becomes difficult, I begin to pay closer attention to what I'm reading.	①	②	③	④	⑤
I use tables, figures, and pictures in the text to increase my understanding.	①	②	③	④	⑤
I stop from time to time to think about what I'm reading.	①	②	③	④	⑤
I use context clues to help me better understand what I'm reading.	①	②	③	④	⑤

I paraphrase (restate ideas in my own words) to better understand what I'm reading.	①	②	③	④	⑤
I try to picture or visualize information to help me remember what I'm reading.	①	②	③	④	⑤
I use typographical aids like boldface and italics to identify key information.	①	②	③	④	⑤
I critically analyze and evaluate the information presented in the text.	①	②	③	④	⑤
I go back and forth in the text to find relationships among ideas in it.	①	②	③	④	⑤
I check my understanding when I come across conflicting information.	①	②	③	④	⑤
I try to guess what the material is about when reading.	①	②	③	④	⑤
When the text becomes difficult, I reread to increase my understanding.	①	②	③	④	⑤
I ask myself questions I like to have answered in the text.	①	②	③	④	⑤
I check to see whether my guesses about the text are right or wrong.	①	②	③	④	⑤
I try to guess the meaning of unknown words or phrases.	①	②	③	④	⑤

While answering the rest of the questions on this survey, it is important that you think about your learning in this teacher's class for this class period only.

2) How true are the following in this class:	Not at all true	A little true	Somewhat true	Mostly true	Completely true
I don't participate in class discussion because I am afraid I will sound stupid.	①	②	③	④	⑤
I would rather do easy work that I can do well than challenging work where I might learn more.	①	②	③	④	⑤
I don't ask questions in class because I don't want people to think I'm dumb.	①	②	③	④	⑤
I stop doing work if I feel like I can't do it well.	①	②	③	④	⑤
I only volunteer to answer a question in this class if I know my answer is right.	①	②	③	④	⑤
Most of my classmates encourage each other to work hard in this class.	①	②	③	④	⑤
Students feel comfortable actively participating in this class.	①	②	③	④	⑤
My teacher gives us lots of opportunities to work with each other.	①	②	③	④	⑤
My teacher makes sure that students get to know each other.	①	②	③	④	⑤
The teacher puts effort into making sure this class is a welcoming place for everyone.	①	②	③	④	⑤

3) How much does your class include each of the following:	None	Very little	Some	A lot
Learning from one another's different ways of reading and thinking.	①	②	③	④

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Working together to figure out the meaning of the readings.	①	②	③	④
Listening and responding to one another's ideas.	①	②	③	④

4) How often have <u>you and your classmates</u> done each of the following in this class:	Never	Sometimes	Often	Very Often
Worked with partners or groups on reading assignments in class.	①	②	③	④
Figured out vocabulary in reading materials.	①	②	③	④
Asked questions about something you have read.	①	②	③	④
Shared difficulties and ways you solved reading comprehension problems.	①	②	③	④
Made notes about thoughts or questions you had about the text you were reading.	①	②	③	④
Talked about what you liked or didn't like about a reading.	①	②	③	④
Talked about how you interpreted something you read.	①	②	③	④
Talked about what was helpful or challenging in reading materials.	①	②	③	④
Thought aloud while reading.	①	②	③	④
Discussed the notes you made about what you read with classmates.	①	②	③	④
Spent class time reading.	①	②	③	④
Read texts other than the textbook.	①	②	③	④
Read visual texts like photographs, cartoons, illustrations, or posters.	①	②	③	④
Read information displayed in charts, graphs, or tables.	①	②	③	④
Read texts from the internet.	①	②	③	④
Read documents like legal papers, newspapers, or magazine or journal articles.	①	②	③	④

5) How much has your reading in this class helped you in the following areas:	Very little	Some	Quite a bit	Very much
Learn the subject of this class.	①	②	③	④
Understand concepts taught in this class.	①	②	③	④
Feel like you can be more successful reading in other classes.	①	②	③	④
Feel more positive about reading in this subject.	①	②	③	④
Have a more positive attitude about reading in general.	①	②	③	④
Feel like this subject is important.	①	②	③	④

6) How confident are you about the following in this class:	Not at all confident	A little confident	Somewhat confident	Mostly confident	Completely confident

I can earn an A in this class.	①	②	③	④	⑤
I can do well on tests, even when they're difficult.	①	②	③	④	⑤
I can master the hardest topics in this class.	①	②	③	④	⑤
I can meet all the learning goals my teacher sets.	①	②	③	④	⑤
I can do well on future assignments in this class.	①	②	③	④	⑤

7) In this class, how often do you:	Never	Once in a while	About half the time	Most of the time	Always
Do the readings or other assigned work to prepare for class.	①	②	③	④	⑤
Turn in assignments on the due date.	①	②	③	④	⑤
Actively participate in class.	①	②	③	④	⑤
Have all of your class materials with you.	①	②	③	④	⑤
Do more than what is expected of you.	①	②	③	④	⑤
Spend extra time outside of class to make sure you are well-prepared for each lesson.	①	②	③	④	⑤

8) Thinking about this class this year, how often have you:	Never	Sometimes	Often	Very Often
Chosen to read more about a subject that you learned about in this class.	①	②	③	④
Tried to learn more on your own about something you learned about in this class.	①	②	③	④

9) About how many pages a day do you have to read in school for this class?	
5 or fewer	①
6-10	②
11-15	③
16-20	④
More than 20	⑤

10) About how many pages a day do you have to read for homework for this class?	
5 or fewer	①
6-10	②
11-15	③
16-20	④
More than 20	⑤

11) How much has your experience in this class helped you in the following areas:	Very little	Some	Quite a bit	Very Much
Understand yourself better as a reader and learner.	①	②	③	④

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Make you curious to read about other things.	①	②	③	④
See yourself as a reader.	①	②	③	④
Be willing to tackle challenging reading materials.	①	②	③	④
Feel more confident that you can read in this subject area.	①	②	③	④
Understand materials better when you read.	①	②	③	④
Make connections between what you read and your personal experiences.	①	②	③	④

The following questions are about your teacher in this class.

12) How often has <u>your teacher</u> done each of the following in this class:	**Never**	**Sometimes**	**Often**	**Very often**
Encouraged students to borrow one another's ideas.	①	②	③	④
Shared his or her own interest in reading in your subject area with the class.	①	②	③	④
Shared his or her own confusions and efforts to make sense of reading materials by thinking aloud.	①	②	③	④
Asked you to explain how you made sense of what you read.	①	②	③	④
Discussed confusions and ways to make sense of reading materials with the whole class.	①	②	③	④
Taught ways to make reading interesting and motivating for students.	①	②	③	④

13) How true are the following statements about this class:	**Not at all true**	**A little true**	**Somewhat true**	**Mostly true**	**Completely true**
My teacher helps us connect what we are learning to real life.	①	②	③	④	⑤
My teacher explains how we can use what we are learning in our future.	①	②	③	④	⑤
My teacher asks for our input about what we want to learn.	①	②	③	④	⑤
My teacher makes what we are learning really interesting.	①	②	③	④	⑤
My teacher lets us design our own projects or assignments.	①	②	③	④	⑤
My teacher helps me pursue questions that are important to me.	①	②	③	④	⑤
My teacher motivates us to become experts in the topics we are learning about.	①	②	③	④	⑤

The following questions are about your beliefs about school and learning in general.

«ID»

14) How true are the following about you:	Not at all true	A little true	Somewhat true	Mostly true	Completely true
My intelligence is something that I can't change very much.	①	②	③	④	⑤
Challenging myself won't make me any smarter.	①	②	③	④	⑤
There are some things I am not capable of learning.	①	②	③	④	⑤
If I am not naturally smart in a subject, I will never do well in it.	①	②	③	④	⑤
I can learn new things in class, but that won't change how good I am at this subject.	①	②	③	④	⑤

Note: The items on this survey were adapted from the following sources: The Becoming Effective Learners Student Survey (BELS-S) developed by the Consortium on Chicago School Research (CCSR), the Metacognitive Awareness of Reading Strategies Inventory, the National Assessment of Educational Progress (NAEP) Reading Student Questionnaire, and the Reading Apprenticeship Opportunity to Learn Survey.

SEED-RAAD TEACHER FOCUS GROUP PROTOCOL – WINTER 2016-2017

Introduction

(Focus group facilitators introduce themselves and explain that they are from IMPAQ International, the external evaluators conducting a study of RAAD.)

Thank you for participating in our focus group about RAAD. The purpose of this focus group is to get feedback on your experience in the RAAD project and how it has affected your teaching. This information will help WestEd make improvements to the project. Everything you say in this focus group will be kept confidential. We will not report any names or schools. We ask that you keep the things you hear in this focus group confidential. We want you to be able to speak freely.

We would like to record the focus group to assist us with our note taking. We will use the recording only for our analyses and will not give access to the recording to anyone outside of the researcher team. Do we have your permission to record the conversation?

Questions

1. **Let's start by talking about your experiences implementing Reading Apprenticeship in the classroom. In what ways (if at all) have your instructional approach or practices changed since participating in RAAD PD experiences? [probe for specific routines, structures, practices and how they differ from what teachers did before. Are you planning your lessons differently? What routines or practices have you tried? How did they go? [probe: How are you thinking about building on those routines/practices? What might you do next?] If practices did not change, why not?**

2. **How are students responding to your changes in practice? Which routines or practices do you think will have the greatest impact on students' learning? Why? What evidence have you seen that leads you to think that? [probe: Were there certain types of students that you've seen the most change in (e.g., low-achieving students? Are there other types of students that you are still working to reach?]**

3. **What has been your experience with the face to face professional development sessions? What are the benefits and challenges related to getting professional development and support through these full-day, in-person sessions? What would you change, if anything, about those sessions? Which discussions, presentations, or exercises covered during these sessions most influenced your classroom practices and routines? [Probe: What about these experiences was impactful?]**

4. **What has been your experience with the online Professional Learning Communities (PLC's)? What are the benefits and challenges of getting professional development and support through the PLCs? [Probes: lack of time, in/convenience of online environment,**

timing of the sessions.] What would you change, if anything, about those sessions? [If not addressed, ask about online platform and ease of use.] Which discussions, presentations, or exercises covered during these meetings most influenced your classroom practices and routines? [Probe: What about these experiences was impactful?]

5. **Do you have local school team meetings focused on Reading Apprenticeship? How are these meetings organized? [probe to determine who leads these meetings] What happens at school team meetings? [probe for examples – e.g., sharing challenges and successes; also probe for opportunities to create and share lessons with other RAAD teachers?] How does this influence your practice?**

6. Which (if any) practices or routines would you like to implement, but have not gotten the opportunity to yet? If you have not been able to implement some of the routines or practices that you would like to, what are the main reasons you have not been able to? [probe for specific barriers such as lack of time/curriculum constraints, competing demands, lack of information on how to implement, lack of support from administrators, etc.]

7. Do you feel that your school/district is supporting your participation in RAAD and your implementation of Reading Apprenticeship? In what ways? [probe for examples – e.g., providing time for training and meeting with other teachers, coaching]

8. Which aspects of Reading Apprenticeship would you like more help in implementing [probe the four dimensions of RA: social, emotional, cognitive, knowledge; metacognitive conversations, extensive reading, etc.]? What kind of help or assistance do you need (if applicable)? [probe for additional professional development, coaching, modeling by other teachers, etc.]

9. Are there any other comments or suggestions you would like to make about your experience with Reading Apprenticeship?