Collaborative Inquiry: Our Path to Learning and Improvement

The Story of Three Teacher Leaders at a Dining Room Table with a Mountain of Data

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Introduction
The Reading Recovery® training model privileges learning derived from observation, discussion, and negotiation within communities of practice (Schwartz, 2006). Ironically, as teacher leaders, we applied these principles to teaching and learning but failed to systematically apply them to our study and use of data. And, while we shared our conclusions from the data with teachers, we weren’t engaging them in the analysis. Essentially, prior to 2016, analyzing and summarizing our annual outcome data was a solitary endeavor, one we did on our own. Our “go it alone” approach was necessitated, largely, by the annual end-of-year mad dash to submit data and write site reports for our university training center (UTC). For a while, this worked well enough as our outcomes were steady and respectable. But, at some point, we realized being “good enough” was not enough. To achieve better outcomes, we had to learn better ways to engage with and use our data. To make learning to do this easier, we needed a space for shared inquiry and discussion (Pinnell, 1994).

In summer 2016, sitting at a dining room table, we chose a new path — a collaboration to help us use our data to improve student outcomes. Although we were uncertain about where to start or where the path might lead, we knew we were on it together. In this article, we describe this 3-year collaborative journey (2016–2019), including the questions we asked to understand our data, our analysis of problems, and the action steps we took to support teacher learning. Moreover, we share some of the many positive quantitative and qualitative outcomes which far exceeded our expectations. While written from the perspective of teacher leaders, our goal is to share our process as a way to engage all Reading Recovery professionals in data analysis aimed at improving teaching and student outcomes.

Year 1 (2016–2017): Discontinued Students

Examining data and theory
Our sites are located in the central and south-central parts of Kentucky, and the districts we serve range from a large urban district to small, rural independent districts. Between our two sites, we work with 7 districts, 43 schools, 74 teachers and approximately 485 Reading Recovery students. Although our total number of teachers and students remained fairly constant from 2016–2019, we had at least one training class each year of the project, continuously shifting the actual teacher participants and their average years in Reading Recovery. Our implementation reflects the ever-changing and highly varied conditions in which Reading Recovery exists.

Until summer 2016, none of us had ever seen any other site’s data, and our only basis for comparison was national and state averages. In essence, we had little idea how good—or how much better—our data could be. It was slightly better than the averages we were comparing ourselves to, but what does that actually mean? This left us with an unclear sense of our success or what else might be possible. We were highly motivated to understand more about our data, knowing that each number represented a human life. Every non-discontinued child was an opportunity; each was our responsibility. At the same time, it was humbling to share numbers...
Our data sharing elicited many strengths and several opportunities for improvement. Among the latter was stagnation in our two sites’ discontinuing rates, both of which began to stall in 2014. We could see a macro-level problem, but still did not understand it well enough to improve it. Unfortunately, the typical questions we asked to guide our analysis of outcome data revealed little substantive information about our stagnant outcomes:

- Is there a difference in average weeks or lessons between students with different outcomes?
- Is there a clear relationship between teacher experience and student outcomes?
- Is there a difference in fall or entry scores between students with different outcomes?

Although these questions are based upon logical assumptions, they did not reveal any specific differences that we could connect to student outcomes. Thus, while we did not find the solutions to our stagnant discontinuing rate in the answers to these questions, we discovered something important about our next steps toward improvement. We learned that even if the answers to any one of these questions had pointed us toward a specific problem, there would still be more questions to ask in understanding how to address the problem. Dr. Clay (2013) emphasized the role of asking effective questions in reading:

> Good readers reduce their uncertainty about what they are reading by asking themselves very effective questions as they read; they know when they are more or less on-track. On the other hand, poor readers ask themselves rather trivial questions and waste their opportunities to reduce their uncertainty. (p. 14)

Although this quote describes readers’ abilities to make sense of their reading, it also captured our need to ask effective questions to make meaning out of data. From this perspective, Clay’s thinking broadens the purpose of data analysis. In essence, the purpose is not simply to find a problematic data point and pose a solution. The goal is to unearth the stories being told by the data. We needed to ask better questions about our data in order to understand those stories.

In the summer of 2016, we attended a session by Mary Fried at the International Reading Recovery Conference in Vancouver, Canada. In her session, she shared a study she co-authored (McGee, Kim, Nelson, & Fried, 2015) which examined change over time in first graders’ strategic action while reading. Her explanation of their study gave us new insight into discernible patterns within running records that might signal positive and less productive paths of progress. It also gave us more-precise language to describe individual errors and error episodes in which students took multiple actions. We were particularly interested in findings she shared related to characteristics of students who made text level gains but didn’t enact the same types of problem-solving actions as those who were successful at the end of first grade. In her talk, Fried described “the close enough students” who were seemingly satisfied with relatively close approximations. Her statement gave us a label for a problem we had noticed but didn’t understand. We knew we had clusters of students who accelerated and were painfully close to reaching the class average but did not discontinue. Further, we wondered if we had students who did discontinue, but whose problem solving, upon closer inspection, more closely resembled the students in their study who did not fully achieve grade-level expectations. Whereas our previous tendency was to see a broad problem (e.g., stagnant discontinuation rate) and immediately generate solutions, Fried’s presentation shifted our thinking. Instead of showing us solutions, it gave us new ways to investigate the possible contributors to a general problem.
As a result, we returned to our data with a new question aimed at exploring the outcomes of students within each status category. For this inquiry, we focused on three groups of students in particular:

1. Students whose lessons were discontinued made substantial progress and fully caught up to their peers in both reading and writing.

2. Students who were recommended for additional intervention made some progress but did not fully catch up to their peers after 20 weeks of lessons.

3. Students whose lessons were incomplete at the end of the year made some progress but were still in Reading Recovery at the end of the school year.

We asked this question about these student groups: “How many students in each status category ended their programs at each text level?” This question gave us a way to explore smaller groupings of students and search for potentially meaningful patterns within the data. Using our Student Data Summary, we displayed end of program text levels for students in each status category.

Although our two sites differ in many ways, the answers to this initial question revealed startling similarities. Specifically, we noticed clusters of students like those Fried had described, including

- students recommended for further intervention who ended their programs at Text Levels 6–9,
- students with incomplete programs who reached at least Text Level 12 but not grade-level average, and
- students who were discontinued at lower text levels than the classroom average.

What is interesting about this inquiry sequence was how redisplaying the data by exit text level illuminated something that was always in our data, but invisible in the aggregate. While we were delighted to see something new, we were daunted by the breadth of possible starting points listed in the above findings. They all seemed important … but where to begin?

We found guidance in an article by Jeff Williams (2016), “Bringing Our ‘A’ Game: Getting to Acceleration and Higher Levels of Text.” In this article, he presents a compelling discussion about text levels as indicators of success and the importance of student opportunity to work on complex texts. We knew from our analysis of end of program text levels that we had some discontinued students slightly below or just at grade level or slightly below at exit. We wondered about the implications of these data for sustained learning and also about the possible instructional conditions from which the data emerged. We hypothesized that we, and our teachers, needed to explore our data to more clearly understand both our text level trends and the problem-solving patterns within discontinued students’ running records. To glean more evidence, we posed new questions:

- Do discontinued students continue to make gains in text reading level following their lesson series?
- Do discontinued students have enough exposure to complex texts within lessons?
- Does the problem solving of discontinued students, at exit, reflect a working system that enables them to solve more complex texts without further support?
These new questions were the first we asked to explicitly link our outcome data (e.g., students discontinued at various text levels) to questions answerable through analysis of student and teacher-level records (e.g., evidence of problem solving). In other words, while we had asked many questions about our outcome data and engaged in various analysis-based experiences with teachers, this time we connected the data to the purpose of our analysis in an intentional way. In doing so, we gave our teachers a path to exploring their lesson-level data in search of explanations for macro trends in our site outcomes. After all, improving student outcomes derives not from interpreting data, but from improving the instructional moves teachers make within lessons. We now had a starting point to engage our teachers in inquiry.

Engaging teachers in data analysis
Since our inquiry centered around problem solving and complex texts, we turned to McGee and colleagues’ 2015 research to support a deeper analysis of how our students’ problem solving changed over time. We sought deeper understandings of patterns and trends within these records that might help us improve student outcomes. We started the 2016 school year with an ongoing professional development (OPD) to introduce teachers to the McGee et al. (2015) study, including the authors’ descriptions of errors and error episodes. Heeding Fried’s advice from her conference session, we asked teachers to bring the records of a discontinued student and a non-discontinued student who had reached at least Text Level 10. They used an analysis tool we created, based upon the study, to record and categorize reading behaviors at Text Levels 5, 7, 9 and the highest text level achieved. The following questions drove the teachers’ exploration:

• Do records of discontinued students show evidence of the problem-solving action that typify grade-level readers? In short, do they indicate evidence of a self-extending system?
• How do the problem-solving patterns evidenced in records of discontinued students differ from non-discontinued students who made significant progress, yet stalled?

Teachers noticed the same patterns of responding in their children that McGee et al. (2015) described. Although we could likely write an entire article about these patterns, a few seemed particularly significant. For instance, they saw movement from single actions to more complex error episodes in both groups of students. They noted the point of divergence, wherein discontinued students moved gradually away from typical action chains to more flexible problem-solving actions, including greater attention to visual information. Non-discontinued students did not. Importantly, this analysis also gave teachers a way to notice students whose lessons were discontinued but who exhibited less flexible problem solving. The ensuing dialogue also gave us an opportunity to build greater, shared understanding of terms we use frequently such as independence, flexibility, integration, complexity, and self-extension.

Using this analytical tool to look for evidence of problem solving was not difficult to do retrospectively and with an entire set of running records from the previous year. Using this tool in real-time, however, required practice. Instead of our standard approach in which two different teachers brought students behind the glass at each OPD, we asked the same two teachers to bring the same two children at every session that fall. We began each session by analyzing the child’s recent running records, using a guide we adapted from the study (see Figure 1).

Following the lesson, we added evidence from our observations and wrote predictions of progress (Clay, 2016) for each child. Writing predictions together had the added benefit of helping all of our teachers learn more about what is often a challenging process. We recorded our tentative hypotheses and next steps on charts to track our thinking and learning. This recursive process allowed time for teachers to link together quantitative data (e.g., text level growth) with their emerging understanding of qualitative indicators of student progress (e.g., problem-solving actions). Most importantly, it allowed us to explore the decisions each teacher made in response to these data, deepening our understanding of responsive teaching moves.

What we learned and how we improved
When the three of us reconvened in July 2017 to reflect on our work, we began with our observations of how coherent and productive our prior year OPD seemed to be. Targeting a specific problem and providing repeated opportunities for teachers to work together analyzing student records had elicited powerful conversations and robust learning. According to Lyons and Pinnell...
(2001), interactions such as these promote “... shared meaning and perspectives [that] result in deeper understanding” (p. 231). Indeed, dedicating this time for discussion and inquiry with colleagues proved exceptionally beneficial to our teachers and their students. At the same time, we were surprised that our outcome data didn’t reveal substantive improvement in the number of students in each status category. After much discussion aimed at trying to discern “what we did wrong,” we realized that progress toward our goal was not answerable through the question we were asking: “Did more students discontinue?” Therefore, we asked a new question: “In light of our focus in OPD, what might constitute evidence of improvement, and where in our quantitative data might we look to find it?”

The data we needed to explore in order to answer this question were the same data that showed us our original problem: exit and end-of-year text levels for discontinued students. Again, we displayed these data to search for trends within actual numbers of discontinued students who reached each text level; in particular, those who met or exceeded standard grade-level expectations. Within these data, we found our first evidence of improvement. Specifically, we had very few discontinued students who did not reach at least Text Level 16 at either interval, and we had many more who read at least Text Level 20. Further, we did not have a single instance of a mid-year discontinued student who failed to increase their text level between exit and end of the year. And, while average text levels for discontinued students were still slightly below the random sample at both mid-year and the end of the year, the gap was much smaller between the two groups. The quantitative improvement in Year 1, albeit slight, reinforced our observations of teachers’ growth in analyzing and describing change over time in problem solving. So, rather than feeling defeated by not fixing every problem in a single year, we returned to our data with a “What’s next?” mentality.

**Entry Points to Inquiry**

- Redisplay some of your data (e.g., exit text reading level) for students within a particular status category (e.g., recommended) to help you find subgroupings of students and/or patterns that are obfuscated by an average. This process will help you identify specific entry points for additional inquiry and clear action steps for improvement. Generate new questions through which to explore the patterns you find, perhaps categorizing those by things you directly control, tangentially influence, and those that are beyond your reach. The goal is to use your data to build deep under-
standing about problems; be cautious in moving too quickly toward solutions.

• Search for areas of strength, and partial strength, within your data (e.g., discontinued students and/or students who made substantial progress but were not discontinued) and analyze, more deeply, the conditions under which such progress occurred. By locating and studying things you’re doing well, or partially well, you may find a high-leverage opportunity to make fast improvement.

Year 2 (2017–2018): Recommended Students

Examining data and theory
Our teachers’ enthusiastic response to our repeated opportunities to analyze running records in OPD made us certain we should continue this type of analysis. As we explored our outcome data, we found other high-leverage opportunities for improvement in the persistent number of students who were recommended for additional service or had incomplete programs. Although we felt reasonably sure that any action steps that we took could be mutually beneficial to students in both categories, we rationalized that focusing on students with a full program gave us more time to impact learning.

Our current status categories have limitations, in that they assign one label to groups of students whose progress often varies greatly. Thus, we needed to ask questions that provided more understanding of the learning trajectories of recommended students both during and following their Reading Recovery lessons.

Specifically:

• How many recommended students ended their program at Text Level 5 or below?
• How many recommended students ended their program at Text Levels 6–9?
• How many recommended students ended their program at Text Level 10–12?
• How many recommended students, who ended their program at mid-year within each text level range, reached at least Text Level 12 by the end of the year?

Redisplaying our text level data to answer these questions gave us an actual number of students within each text level range. This served two purposes: It (a) broke a large category (e.g., recommended) into smaller units for analysis and (b) enabled us to calculate percentages of students within text level bands. This elicited groupings of recommended students:

• Around 40% of our students recommended for further intervention ended their programs at or below Text Level 5.
• 30% of our students recommended for further intervention ended their programs at Text Levels 6–9.
• Around one-third of students recommended for further intervention who ended their programs at Text Levels 7–9, reached at least Text Level 12 by end of year.

Although these discoveries did not generate an immediate solution, they gave us a new way to explore the variation of outcomes for students within a single status category. As we pondered the meaning of these data in relation to these students’ lack of progress toward grade-level proficiency, we wondered, together:

• What contributes to a full-program student ending the program below Text Level 5? Under what circumstances is this happening? What patterns might we find within running records and/or lesson records to help us?
• Why do we have clusters of recommended students who make initial progress, only to plateau at mid-processing levels? Under what circumstances is this happening? What patterns might we find within running records and/or lesson records to help us?
• Many students who were recommended for further service after 20 weeks continued to move up text levels between mid and end of the year. What can we infer about the child’s problem-solving system and/or opportunities we missed to make instructional decisions that may have fostered more accelerated progress during their programs?

Up to this point, our analyses of outcome data focused almost completely on student outcomes and growth across entire sites. Other than patterns of missed lessons or identifying teachers with very low outcomes, we had not asked specific questions about outcomes and growth patterns within school or teacher-level data.
Thus, we posed a new question: Are there patterns of lower-performing students (either by status category or on exit text levels) or student growth within schools or with specific teachers? To explore this question, we looked at outcomes and growth at the school and teacher level using the Reading Recovery School Data Comparison Sheet, the Reading Recovery Teacher Data Comparison Sheet, and the Observation Survey Scores by Schools report. These reports suggested the following:

- Recommended students were more highly concentrated at particular schools and/or with particular teachers.
- Students with incomplete programs were more evenly distributed across schools and teachers.
- Growth on individual Observation Survey tasks for full-program students varied widely across schools and teachers.

Although growth disparities were neither shocking nor revelatory, the degree of disparity and where it occurred was stunning. Many schools and teachers with high-entry students were achieving substantially less growth and lower ending text levels. This finding was invisible to us in the aggregate, particularly for teachers with high discontinuation rates. In essence, our attention had been so focused on recommended students served by teachers with very low outcomes that we had missed some patterns of limited growth and outcomes for particular students served by schools and teachers with good, or even great, overall discontinuation rates. We began to wonder if we had two distinct yet interrelated problems: (a) urgency around acceleration and (b) intentional teaching to foster rapid, sustained, and maximal growth, for some students in particular.

A 2016 evaluation of Reading Recovery by the Consortium for Policy Research in Education (CPRE) gave us an additional perspective from which to consider our data and the interrelationships of teacher actions and student outcomes (May, Sirinides, Gray, & Goldsworthy, 2016). We wondered if the authors’ model of instructional strength, defined as “the extent to which a teacher instructs for maximum learning in every lesson,” (p. 83) might give us insight into characteristics of highly successful Reading Recovery teachers. They posited instructional strength as a function of teaching that was both deliberate and dexterous; in other words, careful preparation aligned with evidence of student strengths and needs (deliberateness), and nimble response to students within the lesson (dexterity). Williams (2016) mapped instructional strength onto Clay’s vision for us as Reading Recovery professionals: “Clay’s vision called us to design superb lessons. Not so-so lessons. Superb. To do this, we must bring all that we know to the table to design lessons that cause meaningful shifts for the learner” (p. 8).

To design “superb” lessons, our teachers had to recognize and understand how to both interpret and respond to patterns in student problem solving. Our analysis in the prior year’s OPD was aimed toward interpretation. Although this was crucial, we wondered how to help our teachers more explicitly link the decisions they made in lessons to problem solving evidenced in their student records. Further, we needed to build shared understanding of what it meant to be deliberate and dexterous and how to make decisions that were responsive to student needs.

**Engaging teachers in data analysis**

Our 2017 OPD included another analysis of prior-year students. Because students who were recommended for further intervention constituted a high-leverage target, we asked teachers to bring the records of a full-program student whose progress was significantly less than their discontinued peers. For comparison, they also brought the records of a discontinued student. The goal was to explore student records to build greater understanding of the concepts of deliberate and dexterous teaching and find ways to improve our instructional strength. Whereas our 2016–2017 analyses focused heavily on running records, this time we asked teachers to bring an entire set of student records so we could learn more about quantitative growth trajectories from week to week and across a child’s program. We began with the daily attendance forms and weekly records of reading and writing vocabulary and asked teachers to explore the following:

- What patterns of acceleration do you notice in text reading level, writing vocabulary, and reading vocabulary in recommended students?
- How do these differ from students whose lessons were successfully discontinued? Are there clear points of convergence and/or divergence within the growth trajectories?
• What might you infer from these data from the perspective of student processing and/or teacher decision making?

Although only a first step in a comprehensive analysis, these questions revealed much about patterns in acceleration. Specifically, we saw patterns of students who spent weeks in single text levels and slowly accumulated new words in both reading and writing. The records of reading and writing vocabulary also showed patterns of fragile learning, with strike-throughs and erasures of words teachers “thought were known.” The weekly records also revealed another glaring trend: Lagging acceleration was particularly pervasive in the first half of many children’s programs. Digging deeper into acceleration in the first few weeks, we noticed a major point of divergence between the two groups between entry and the end of week 5. Although entry data was quite similar for recommended and discontinued students, students who were eventually discontinued showed substantial increases on Text Reading Level and known words during that 5-week period. Although we weren’t quite sure what was happening to cause this, we knew whatever it was started almost immediately.

These findings generated powerful discussions about teacher responsiveness from the very first lesson, situating the role of teacher urgency within deliberate and dexterous decision making (May et al., 2016). This finding reinforced again that the only mechanism to improved student outcomes was improved teaching. In this way, our teachers began to relate patterns in their data to their own instructional strength.

To further understand the problem-solving actions relative to the quantitative patterns we unearthed in students’ attendance records and weekly records of reading and writing vocabulary, we returned to McGee et al. (2015) to analyze change over time in actual problem solving. We used an analytical tool created by McGee and Fried (2015) and adapted by Williams (2016) that moved us beyond our initial depiction of their categories. Using this tool to categorize evidence of student error behavior, we asked the following questions:

• What patterns of acceleration and errors/error episodes are evidenced in running records of recommended students?
• How do these patterns mirror and/or differ from students whose lessons were successfully discontinued?
• What can be inferred about student processing (either strengths or challenges) from these analyses?

During their analysis of running records of recommended students, teachers noticed a variety of patterns: no attempts followed by a teacher telling the word (a told), more teacher tells in general, gross visual discrepancies that were not monitored, and persistent attempts that had gross visual discrepancies based upon first letter cues. Although most records evidenced some complex error episodes (McGee et al., 2015), there was a noticeable lack of multiple attempts or substitutions that weren’t whole words. These analyses generated illuminating discussions about independence, consolidation, and learning to take action at difficulty.

This led us to a new question: For both recommended and discontinued students, which teacher decisions may contribute to these patterns and/or resolve them? To explore this question, we looked more closely at lesson records for both recommended and discontinued students and thought about the teachers’ priorities and decisions (e.g., teaching points, word work, book choice, orientation) in relation to the problem-solving actions we noticed in the running records. We also searched for similar patterns in student writing, something we had neglected to this point. One pattern that emerged was a noticeable difference in self-monitoring between the two student groups. Further, teacher notes and lesson priorities seemed highly focused on fixing errors very early on, perhaps neglecting to secure the child’s system for finding the errors. Anderson and Kaye (2016) warned about teaching that too quickly merges monitoring and solving, potentially rendering both systems less effective. We began to think that this tendency within our teaching was a high-leverage opportunity to improve the trajectory for many of our non-discontinued students (and perhaps all students). Throughout 2017–2018, we used our OPD to explore student lesson records, running records, and writing samples to deepen our understanding of self-monitoring, in particular. Moreover, we included readings (e.g., Anderson & Kaye, 2016; McBane, Schnug & Slinger, 2017) to explore teaching decisions in reading and writing that foster self-monitoring.

What we learned and how we improved

In summer 2018, we returned to the dining room table with our data. To our delight, the data revealed an increase in our full-program discontinuing percentage and a substantial decrease in the number of recommended students who exited the pro-
gram below Text Level 6. We also saw continued progress toward our Year 1 goal of discontinued students exiting at higher text levels. In fact, for the first time, our discontinued students met or surpassed the random sample students on Text Reading Level at mid year. We had momentum! We also had many areas identified for improvement; in particular, while our overall data were better for full-program students, our percentage of students with incomplete programs was not decreasing. In fact, it increased slightly in one of the two sites. Thus, understanding more about students with incomplete programs became our next step.

**Year 3 (2018–2019): Students with Incomplete Programs**

**Examining data and theory**

Since our goal was to understand conditions that may contribute to students with incomplete programs, we reflected on what we already knew based upon prior inquiry. Basically, the number of weeks and lessons was almost identical for second-round discontinued and students with incomplete programs. Although we had also explored entry text levels among different student groups as a possible explanation in 2016, we returned to our data to see if these group scoring patterns had changed over time.

As before, our data showed very little difference between these students at entry on Text Reading Level. However, students whose lessons were discontinued achieved far more growth than students whose lessons were incomplete, despite receiving nearly the same number of lessons. We wanted to learn more about this seemingly meaningful pattern of entry and exit text levels. Our exit data showed us the increase in text level (how much students improved in text level); however, we needed to describe these data to have a clearer understanding of the rate of increase in text level (e.g., how fast they accelerated).

Thus, a new question emerged: On average, what is the rate of acceleration on text reading level of second round discontinued and students with incomplete programs? Using data for mid-year entry students, we created a table that showed the average entry and exit text level for mid-year entry students whose lessons were discontinued and those with incomplete programs. We subtracted the entry level from the exit level for each group to calculate the overall Text Reading Level gain while in the program. Then, we divided the gain by the number of weeks served. This calculation showed us the increase, which we referred to as “rate of acceleration” per week (see Table 1). We were stunned to find that the rate of increase per week was more than double for discontinued students. More confounding was the fact that entry scores for both groups were not nearly as dissimilar as exit scores.

Something was happening within the instructional process for mid-year entry students that we did not yet understand. And, although the rate-per-week increase we found was just an average, there was something important about having a way to quantify a concept as nebulous as acceleration. While we would never impose rules (e.g., “A text level per week, or else!”), having a better sense of how quickly successful students accelerated gave our teachers something important to notice. After all,

| Table 1. Rate of Acceleration in Text Reading Level Growth for Mid-Year Entry Students |
|----------------------------------|----|--------|--------|----------|--------|
| Student Group | Weeks/Lessons | TRL | TRL | Growth | Per Week |
| Discontinued   | 11.4/40.25 | 4.7 | 18.3 | 13.6 | 1.2 |
| Incomplete     | 10.9/40.15 | 3.4 | 8.4  | 5.0  | 0.46 |

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**Entry Points to Inquiry**

- Explore student growth at specific junctures within the lesson series (e.g., first 5 weeks; weeks 5–10) and analyze both the problem solving and the teaching decisions evidenced in running records, lesson records, and writing samples within that span. Formulate hypotheses about the relationship between teacher decisions (e.g., lesson priorities) and the child’s progress (e.g., text level and problem solving in reading and writing). With a colleague, discuss the patterns you notice and how they inform your thinking about teaching and/or student learning.

- Conduct similar analyses with students across status categories and describe what you learn about the child’s problem solving and contingent teacher decisions. You might pay close attention to a specific aspect of a literacy processing system (e.g., self-monitoring), that is a strong indicator of eventual student outcomes.
to change the trajectory for these children, teachers had to notice and respond to potentially negative patterns in their data.

**Engaging teachers in data analysis**

Our revelations around acceleration patterns sent us in search of new ways to interact with teachers and their data. We wanted to understand, call attention to, and circumvent slow progress. Although we were focused on mid-year entry students, logic dictates that there is some relationship between the length of first-round programs and our percentage of students with incomplete programs. Although Anderson and Kaye (2016) used the terms "finding and fixing" to refer to students, we respectfully borrowed their idea to illustrate our rationale for our next action step.

In essence, teachers had to notice (find) the problem, and understand it, before they could solve (fix) the problem. We needed a better process to draw teachers’ attention to patterns of acceleration and their instructional response to those patterns. After all, the only way to improve outcome data is to improve our teaching moves during the intervention.

For nearly two decades, the teachers in our sites shared monitoring forms with the teacher leaders at monthly ongoing professional development. While this practice was important, it was too slow and delayed teacher leader guidance. Seeking a more efficient process, we explored online platforms to share weekly attendance forms as a mechanism to support student progress in real time. We converted our standard attendance form into a Google Sheet (Figure 2) and uploaded those to a shared drive so each student’s data was accessible to individual teachers and teacher leaders. We wanted to promote continuous dialogue with teachers about positive and problematic patterns in student acceleration. Thus, we established conditional formatting rules to highlight specific data (e.g., missed lessons, accuracy percentages below 90%, low self-correction ratio), visually elevating them to capture teacher attention. In a sense, our document illuminated important data to provide visual signals, including potentially important patterns in acceleration.

Online documentation gave us effective, real-time opportunities to collaborate with teachers. It also provided insight into possible contributors to stagnant student outcomes. Because early acceleration was such a focus, we were quick to point out (using the comment function within our documents) acceleration patterns in both text level and writing vocabulary. The power of these online discussions is difficult to overstated. Using real-time data gave us an opportunity to help teachers notice patterns and respond to them.

Throughout the 2018–2019 school year, we used our time in OPD to address patterns, problems, and common confusions that emerged from our conversations with teachers around their online data. As teachers engaged in conversations about data and instructional decisions, they demonstrated trust in each other. Their collaborative discussions built shared understanding of problems and opportunities for improvement. Further, the continuous dialogue both online and within OPD gave greater purpose to our exploration of the CPRE report (May et al., 2016). It seemed that exploring the concepts of deliberateness and dexterity through the lens of our real-time data gave us a clearer way to see and understand our problems. More importantly, it gave us opportunities to reflect upon teaching moves that might address these problems.

**What we learned and how we improved**

When we returned to the dining room table in summer 2019, we had confidence and clarity that eluded us at the beginning of this journey. Over 3 years, we learned to pose better questions about data, conduct analyses to answer those questions, and apply our learning from these analyses to formulate action steps toward improvement. While engaging in this collaborative inquiry has been challenging and circuitous, we allowed ourselves to be vulnerable as colleagues and create a space to ask questions without fear of being “wrong” or missing something important. We celebrated successes with one another, gained confidence from each one, and celebrated growth, no matter how small. Lyons and Pinnell (2001) posited, “Learning something difficult builds self-confidence and motivates you to seek additional challenges” (p. 3). Indeed, instead of fear or frustration, our successes helped us embrace new risks and view failure as an opportunity to learn and do better. As a collaborative team, we developed agency for constructing our own meaning from our data.

Most crucially, engaging in this work helped us achieve our goals of improving student outcomes. In fact, our 2018–2019 data revealed we not only met, but exceeded, our initial goals. Although the actual percentages differ from site to site, those also differed at the onset of this project. Since this story is about a shared journey, we’ve chosen to combine
our outcomes to illustrate our collective success. These data (see Table 2) illustrate improvement across all student groups and every problem we explored in OPD. While we still have a myriad of opportunities to improve and many problems to solve, this work has given us a clearer path toward doing so. These student outcomes are massively important, and, after all, children’s success is our endgame. However, this story is about learning. Some of our learning was new, but some of it was deepening our understanding of things we had learned before. Specifically, we now have much greater clarity about Dr. Clay’s message: “If a child is a struggling reader or writer the conclusion must be that we have not

Figure 2. Sample Online Student Attendance Form

Reading Recovery Data Form
2019-2020

RR Teacher: A. Jones
Child: Benjamin Miller
Birthdate: 1-17-13
Person ID: 123456
School: ABC Elementary
Classroom Teacher: Smith
IC Identified Race: AA
Language Other Than English? No

<table>
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Date LI OWT CAP WV HSIW TL % ACC SC Rate Status

Fall 8/22/19 30 1 9 1 27 1 94 -
Entry 8/22/19 30 1 9 1 27 1 94 -
End 12/4/19 54 20 21 42 37 16 97 1.2 D
Spring

Status Codes:
D: Discontinued  R: Recommended for Action after Full Program  M: Moved
I: Incomplete Program at Year End  NoA: None of the Above (Please Explain)
yet discovered a way to help him learn” (Clay, 2016, p. 165). In other words, identifying and understanding the problems in our data was essential; but, improvement rests upon our ability, as teachers, to make superb decisions for individual children.

**Entry Points to Inquiry**

- To help yourself become more sensitive to the quantitative signals of acceleration in real-time, look closely at the growth trajectories of students within and across different outcome groups (e.g., discontinued, recommended, incomplete). With a colleague, explore the purpose of our quantitative data (e.g., text reading level, self-correction ratio, writing vocabulary) and how it may inform your understanding of a child’s progress.
- Most importantly, explore the implications of these data for your decision making within lesson series. Do not restrict your analysis to students who make slow progress. This is important for our work with all students, regardless of their rate of acceleration or outcomes. For instance, examining the records of a discontinued child might reveal how you maximized, or overlooked, opportunities to make the child’s lesson series even more efficient.

**In the End (And Looking Forward)**

One of the beliefs we hold dear in Reading Recovery is that each child’s literacy journey is unique. Indeed, our job is to work alongside children as a knowing guide, no matter how circuitous or idiosyncratic their path. Our system provides similar support from trainer to teacher leader, and from teacher leader to teacher. While individual paths may differ, we are never supposed to be on them alone. Facing challenges that we weren’t sure how to address on our own is what brought us together at the dining room table. This account of our work reveals the learning and improvement we experienced by coming together as colleagues.

Still, ours is but a single example of teacher leader collaboration and inquiry. The questions we asked, reports we sought for guidance, conclusions we drew from our analyses, and actions steps we employed in response to our findings are neither the only nor maybe even the best options. While not a roadmap, our story depicts the complexity of our work as Reading Recovery professionals and the importance of exploring the inextricable relationship between student data and teacher decision making.

It is our privilege as teacher leaders to share this story, but it does not belong to us. It belongs to our teachers. They have followed us down every path—including some that led to dead ends.

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### Table 2. Change in Student Outcomes Across Sites (2016–2019)

<table>
<thead>
<tr>
<th>Student Group</th>
<th>Change in Student Outcomes</th>
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</table>
| Discontinued                         | Increased our full-program discontinuing rate by 5% and 11% with 85% and 92% of full-program students discontinued in 2018–2019.  
Increased our overall discontinuing rate for all students served by 5% and 13% with 70% and 74% discontinued overall in 2018–2019.  
Increased the mid-year and end of year text levels for discontinued students so the average at both intervals met or exceeded random sample students. |
| Students whose lessons were not discontinued (Recommended or Incomplete) | Reduced our recommended students by 1% and 9% with only 12 students recommended for further services following a full program in 1 of the 2 sites at the end of 2018–2019.  
Reduced our percentage of students with incomplete programs by 5% and 7% with only 15% and 10% of students with incomplete programs at the end of 2018–2019.  
Reduced the percentage of recommended or incomplete students who exited their programs below Text Level 6 by 30% from 2016–2019.  
Increased the percentage of non-discontinued students who ended the year at Text Level 12 or higher; over 50% of students recommended and incomplete students ended 2018–2019 in this range. |
and cul-de-sacs—with fearless vulnerability, unwavering trust, and a steadfast commitment to their children. Their open-minded approach to learning and their willingness to do this challenging work exemplifies what is possible for individuals within a community of practice (Schwartz, 2006; Lyons & Pinnell, 2001). In 2016 we asked ourselves, “Where and how do we start?” and in each of the 2 years subsequent, “What should we do next?” Sitting here today, in 2020, our question is, “What else might be possible for us?” Our answer: “Working together ... anything.”

References

About the Authors
Amy Smith is a Reading Recovery teacher leader in Richmond, KY, where she serves both suburban and rural districts. Prior to becoming a teacher leader in 2001, she was a primary classroom teacher in a university laboratory school and a Spanish-immersion magnet school. Amy has served as a member and chair of the RRCNA Advocacy Committee and on the board of directors as presidential appointee. She is currently the president-elect of RRCNA. Amy also serves on the North American Reading Recovery Improvement Science Hub, and was recently named Hub co-director.

Beth Magsig is a Reading Recovery teacher leader with Fayette County Public Schools in Lexington, KY. She completed her Reading Recovery teacher training in 2006 and became a teacher leader in 2014. Prior to her Reading Recovery training, Beth spent 6 years as a primary grade classroom teacher. Beth achieved National Board Certification in 2011 and is currently serving on the Literacy Lessons Advisory Committee for RRCNA. In addition to sharing her knowledge at local conferences, she has presented at the Reading Recovery Teacher Leader Institute in 2015 and 2019.

Amy Emmons is a Reading Recovery teacher leader in Lexington, KY, where she works with Reading Recovery and Literacy Lessons teachers in both urban and suburban schools. Prior to her initial training as a Reading Recovery teacher in 2006, she taught kindergarten and first grade in a Title I school. Amy completed her National Board Certification in Literacy: Reading-Language Arts/Early and Middle Childhood in 2010. She is a frequent presenter at the RRCNA national conference, sharing her expertise in sessions for both the classroom and Reading Recovery strands. Additionally, she has presented at the Reading Recovery Teacher Leader Institute, most recently in 2019.