Effective Implementation: What We Can Learn from the i3 Study

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In the final i3 report, Reading Recovery: An Evaluation of the Four-Year i3 Scale-up Report, researchers noted that “The i3 funded scale-up of Reading Recovery was one of the most ambitious and well-documented expansions of an instructional program in U.S. history, and it was highly successful” (May, Sirinides, Gray, & Goldsworthy, 2016, p. 4). Because this large-scale study was externally evaluated, rigorous in research design, and represented a comprehensive review of Reading Recovery® across the nation, it yielded a goldmine of information relating to implementation including the training of teacher leaders and teachers, communication, teaching of children, and school-level influence.

The purpose of this article is to review the design and goals of the i3 study, provide detail of how the researchers examined implementation factors, and present the findings relevant to implementation in terms of training and teaching and at the school level. Additional implementation areas that were identified as not meeting fidelity will also be discussed. Through discussion of the information shared in this article it is hoped that Reading Recovery professionals will celebrate our identified strengths and engage in dialogue about how to problem solve areas of challenge.

Design of the Study

This multiyear mixed methods study involved all 19 university training centers in the United States. Qualitative data included 334 interviews of trainers and teacher leaders, 23 field-based case studies conducted at the school level, the review of over 50 lesson records, 70 lesson observations, teacher and teacher leader surveys, and activity logs over the course of the study. Researchers analyzed quantitative outcome data on 6,888 students in 1,122 schools.

The Consortium for Policy Research in Education (CPRE) published reports for Year 1, Year 2, and for the final 4-year results (May et al., 2013; May et al., 2014; May et al., 2016). This article is based on the data reported from the final 4-year research report and includes findings from interviews, online surveys, lessons observations, activity logs, and examination of lesson records.

Following are the primary goals of the CPRE study:

1. Provide experimental evidence of the short- and long-term impacts of Reading Recovery on student learning in schools that are part of the i3 scale-up.
2. Assess the implementation of Reading Recovery under the i3 grant, including fidelity to the program model and progress toward scale-up goals. (May et al., 2016, p. 1)

While there are many studies of evidence-based programs, there are relatively few studies examining the implementation of the programs, particularly implementation scale-up (Fixen, Naoom, Blase, Friedman, & Wallace, 2005). Yet, it is the quality of implementation that ensures children have the opportunity to learn to read. Thus a careful review of the information compiled about implementation is essential. The i3 researchers were aware that variation among educational program implementations has not been adequately examined in previous research (Bryk, Gomez, Grunow, & LeMahieu, 2015; May et al., 2016). To inform a richer description of factors related to implementation at the school and site levels, researchers applied procedures to gather extensive qualitative data (observations, interviews, etc.). This included an examination of fidelity to Reading Recovery implementation processes and procedures.

For the purposes of the i3 study design, researchers looked to the Standards and Guidelines of Reading Recovery in the United States, 6th Edition (Reading Recovery Council of North America [RRCNA], 2012) as indicators of fidelity. These standards provide requirements for training and implementation that were established to ensure adherence to implementing Reading Recovery with consistency and fidelity. These standards have upheld the fidelity of Reading Recovery for over 30 years.
in the United States. All schools must be in compliance with the standards in order to be granted an annually issued royalty-free trademark by The Ohio State University. The trademark and standards are directly tied to data submitted by each school and provide assurance of quality and consistency of the intervention throughout the United States. Researchers turned the standards, totaling 51 discrete statements, into “clear and measurable program indicators” (May et al., 2016, p. 73) and based the fidelity of the intervention on these signposts. The indicators were considered by the i3 researchers to be implemented with fidelity if 80% of respondents (Reading Recovery teachers, teacher leaders, site coordinators) reported complying with a standard as presented in the standards document. Reading Recovery professionals at all levels recognize that standards are deemed essential for assuring a quality intervention for children and effective implementation at the school level; therefore, using standards as the litmus test for program effectiveness provided a true measure of the quality of our work across the United States.

Implementation of Reading Recovery at the Teacher and Teacher Leader Level

Two elements of Reading Recovery at the teacher and teacher leader level were addressed by the i3 report to examine implementation: (a) initial training and ongoing professional development for teachers on all aspects of Reading Recovery, and (b) teaching of Reading Recovery children on a daily basis.

Implementation Issues Related to Training

Teachers in the study reported that the initial training they received in the form of graduate-level coursework provided by teacher leaders was intensive, rigorous, and transformative. Both trained and in-training teachers reported that their teacher leaders provided support for their training and ongoing professional development and were a continual resource for their work with children. They also reported that the behind-the-glass sessions were an important part of their training and offered opportunities for them to receive feedback on their own teaching, while contributing to the learning of others in their group.

While results indicated that teachers reported receiving adequate training and support from their teacher leaders, the study found great variability in the way university trainers supported and supervised teacher leaders. In the analysis of one year’s results, Year 2, fidelity to the standard stating that trained teacher leaders should receive a minimum of two site visits from a trainer during the field year (RRCNA, 2012, p. 21), dropped below the benchmark to 78%.

Implementation Issues Related to Teaching of Reading Recovery Children

Teachers met the standards by teaching four students daily with one-to-one lessons. Findings reported that Reading Recovery teachers varied in assignments the other half of their day. Some taught small literacy groups, taught in a regular classroom, or served as literacy coaches. Often teachers commented on the demanding nature of their work and difficulty finding adequate time for planning or collaborating with other teachers during the school day. They also met standards of daily instruction for their Reading Recovery students. Despite the challenges of student absences and teacher unavailability, many of the teachers were flexible in the ways they found to make up lessons — either coming in early, staying late, or altering their schedules to make sure all four students received daily lessons.

Lesson records indicated “teachers adhered closely to the lesson structure and procedures” (May et al., 2016, p. 91). As teachers gain more experience working with students they learn how to plan, deliver, and adjust to idiosyncratic needs of individuals within the framework of the lesson structure and procedures of Reading Recovery.

The report quoted a trainer who said, “… one mark of a strong Reading Recovery teacher-in-training is the desire to acquire as much knowledge as possible in order to provide every student with the best instruction she can” (p. 95). The researchers contributed this type of commitment and engagement in continual learning to participation in “community-enhanced reflective practice” (p. 95).

Purposeful observation, ongoing reflection, engagement with continued learning, deliberateness, and instructional dexterity were identified as part of the instructional strengths noted as an emerging theme in the i3 report.

Instructional strength—defined as “the extent to which a teacher instructs for maximum learning in every lesson” (May et al., 2016, p. 90)—is an aspect of teaching of particular interest to the researchers. The researchers identified the concept as part of the training to become a Reading Recovery teacher and also a focus during ongoing professional
development. Deliberateness (thoughtful practice) and dexterity (flexible application of deep skill) were noted aspects of instructional strength. Deliberateness occurs outside of the lesson, and deliberate teachers engage in

- analysis of student progress based on observation,
- ongoing reflection about teaching, and
- active engagement in continual learning both independently and within the community.

Instructional dexterity, on the other hand, takes place within the context of teaching. Dexterity could be considered to be an outgrowth of deliberate practice. Elements include

- rapport which enhances maximum growth,
- moment-by-moment decision making within the lesson,
- careful use of language (prompting), and
- urgency in the lesson pace and instructional moves.

Teachers follow the lesson structures and procedures with fidelity, but within these structures individual teacher moves are made based on teacher expertise and the needs of individual students. Teachers who were perceived as strong exhibited both deliberativeness and instructional dexterity.

In order for a Reading Recovery teacher to plan for and engage in teaching with instructional strength, the professional experiences provided by teacher leaders need to include learning about how to be both thoughtful in planning (deliberate) and flexible (dexterous) during teaching. Reading Recovery teachers are better able to grow into this level of practice with support from the teacher leader, but also support from administrators at the school and district level. This leads us to what was revealed in the report about the importance of school understanding and support for Reading Recovery.

Levels of Understanding and Commitment at the School Level

The goal of the school-level research component, based on 23 case studies, was to “explore the processes and successes of implementation at the school level” (May et al., 2016, p. 107), particularly since there were few qualitative studies available on the impact of Reading Recovery lessons on students’ literacy skills. By looking at individual schools, researchers were able to view Reading Recovery implementation in depth and in context, as well as document how the intervention served as an impetus of reform and improvement of the educational system when implemented well. The data were collected over a period of 2- to-3-day site visits at schools that scaled up the training of teachers with i3 grant money. Researchers observed Reading Recovery lessons, took detailed field notes, shadowed the Reading Recovery teacher, observed instruction in first-grade classrooms, observed teacher leader visits, and conducted a series of one-to-one semistructured interviews with teacher leaders, teachers, and principals (May et al., p. 110). School data were examined, first individually, and then synthesized across cases to look for themes and patterns across and within cases.

At first glance, it appeared that all schools were implementing Reading Recovery with fidelity to the best of their ability and implementation looked similar across all 23 case studies. However, a more in-depth analysis revealed that there was great variation in the way “relationships formed around Reading Recovery, how well the program was understood by those outside of it, how deep a commitment teachers and administrators expressed to supporting and sustaining the program, and how much it appeared to be part of the school’s broader approach to literacy” (May et al., 2016, p. 115). All of these factors played an important part in influencing the levels of success each school achieved. Through the cross case analyses, researchers identified four schemas of understanding and commitment identified as Isolation, Obstruction, Endorsement, and Integration, summarized in Table 1.

Isolation Schema

The results of the analyses revealed that only two schools’ implementations were identified as Isolation. In discussion of the low number of schools in this category, the researchers surmised that perhaps when implementation was this weak, Reading Recovery did not last within the school. Or, perhaps any schools with weak implementations did not volunteer to be part of the research. Researchers determined that in these schools, little groundwork had been laid prior to implementing Reading Recovery. Interviews revealed that principals had little buy-in and viewed Reading Recovery as too costly. The Reading Recovery teachers reported working in isolation with little support, communication, or validation from classroom teachers or the principals.
Implementation

<table>
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<tr>
<th>Obstruction Schema</th>
<th>Endorsement Schema</th>
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In schools whose schema of implementation was identified as Obstruction, there was variable commitment and understanding for a variety of reasons. Reading Recovery teachers often reported they had difficulty balancing their roles as Reading Recovery teachers with their roles the other part of the work day. Either the principal wasn’t protecting their instructional time, or in the case of teachers working in a shared classroom model, they felt conflicted about responsibility to individual students and responsibilities to the classroom of students they were leaving when they taught individual Reading Recovery lessons. In some schools, administrators and teachers talked about the ‘lack of fit’ between Reading Recovery and state or district curriculum and instruction priorities. Examples of lack of fit could be constraints on staffing models, or a perceived lack of fit between Reading Recovery and the needs of a school. Most often lack of fit was seen as an issue of competing priorities.

Endorsement Schema

Schools that were identified as having Endorsement schemas of implementation had administrators and teachers who were highly committed to Reading Recovery but knew little about the intervention itself. Classroom teachers reported that they recognized that children benefitted greatly from receiving Reading Recovery lessons and valued the program, but had no idea of what was involved in teaching the students. In Endorsement schools, Reading Recovery teachers were valued for their expertise by both the administration and classroom teachers. There was regular communication between Reading Recovery and classroom teachers about the students they had in common, but these conversations took place informally.

### Table 1. Four Schemas of Implementation Identified in the Final i3 Scale-Up Report

<table>
<thead>
<tr>
<th>Isolation</th>
<th>Obstruction</th>
<th>Endorsement</th>
<th>Integration</th>
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<tbody>
<tr>
<td>Low Understanding</td>
<td>Variable Understanding</td>
<td>Variable Understanding</td>
<td>High Understanding</td>
</tr>
<tr>
<td>Low Commitment</td>
<td>Variable Commitment</td>
<td>High Commitment</td>
<td>High Commitment</td>
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- Little or no shared understanding of Reading Recovery
- Little or no problem solving to ensure program fidelity
- No emphasis on the schoolwide impact of Reading Recovery
- Reading Recovery instructional time not protected
- Little Reading Recovery/classroom teacher communication
- Reading Recovery teacher not positioned as literacy leader or resource in the building
- Classroom instruction generally not supportive of Reading Recovery
- Variable understanding of Reading Recovery
- Variable commitment to Reading Recovery
- Limited principal engagement with Reading Recovery
- No emphasis on schoolwide impact of Reading Recovery
- Variable Reading Recovery teacher/classroom teacher communication
- Reading Recovery teacher not positioned as literacy leader or resource in the building
- Classroom instruction generally not supportive of Reading Recovery
- Variable understanding of Reading Recovery
- Active schoolwide problem solving to ensure program fidelity
- Principal passively engaged with Reading Recovery
- Little emphasis on schoolwide impact of Reading Recovery
- Reading Recovery instructional time protected
- Frequent Reading Recovery teacher/classroom teacher communication
- Reading Recovery teacher positioned as literacy leader or resource in the building
- Classroom instruction generally not supportive of Reading Recovery
- Variable understanding of Reading Recovery
- Active schoolwide problem solving to ensure program fidelity
- Principal actively engaged with Reading Recovery
- Highly emphasized schoolwide impact of Reading Recovery
- Reading Recovery instructional time protected
- Frequent Reading Recovery teacher/classroom teacher communication
- Reading Recovery teacher positioned as literacy leader or resource in the building
- Classroom instruction generally supportive of Reading Recovery
- Schoolwide shared understanding of Reading Recovery
- Schoolwide active problem solving to ensure program fidelity
- Principal actively engaged with Reading Recovery
- Highly emphasized schoolwide impact of Reading Recovery
- Reading Recovery instructional time protected
- Frequent Reading Recovery teacher/classroom teacher communication
- Reading Recovery teacher positioned as literacy leader or resource in the building
- Classroom instruction generally supportive of Reading Recovery

**Source:** May et al., 2016, pp. 118–137
Implementation

Looking closely at these categories of implementation could help administrators and Reading Recovery professionals evaluate their own schools in terms of what is working well and what could be improved to not only increase the outcomes for their Reading Recovery students, but also impact their total school literacy programs.

There were no formal structures for conferencing about students. Many of the principals were supportive, but took a hands-off approach; not taking an active role in implementing structures that would maximize the expertise of the Reading Recovery teachers, collaboration, or knowledge sharing.

Integration Schema
Almost half of the schools were implemented at the Integration level. This is the level of implementation that yielded the greatest impact, not only to the students, but to the schoolwide literacy initiative in general. It didn’t seem to matter how long Reading Recovery had been implemented since schools in this category ranged from 2–20 years of implementation. In these schools, Reading Recovery was used as an impetus to build capacity for literacy achievement. Reading Recovery teacher leaders and teachers were valued as having expertise, and both formal and informal structures were built to facilitate collaboration and knowledge sharing. Literacy team meetings were scheduled to discuss particular students or share planning time. Reading Recovery and classroom teachers worked as collaborative partners to benefit all students. Classroom instruction often aligned theoretically with literacy processing theory, and teachers used common language and strategies to make Reading Recovery and classroom instruction seamless for students who struggled. Principals were actively engaged in promoting collaboration, commitment, and resources to promote teamwork. They were vigilant in protecting Reading Recovery time, setting structures and opportunities for collaboration to ensure that Reading Recovery was well integrated into the whole school’s approach to literacy instruction. In these schools, Reading Recovery had become institutionalized.

Using the Implementation Schema Findings
Looking closely at these categories of implementation could help administrators and Reading Recovery professionals evaluate their own schools in terms of what is working well and what could be improved to not only increase the outcomes for their Reading Recovery students, but also impact their total school literacy programs. Make an appointment with your site coordinator or principal to discuss the i3 implementation findings and work to problem solve areas that could be improved.

Additional Implementation Issues
There were three areas that researchers identified as not meeting fidelity in the area of school-level implementation: (a) commitment to implementation, (b) student selection, and (c) timing of the start of lessons.

Commitment to Implementation
The standards for selection of teachers states that, “[Teachers] be employed in a school that has a commitment to implementation” (RRCNA, 2012, p. 9), and this was interpreted by the researchers to mean that the school be committed to train enough teachers to reach full implementation or the capacity to serve every student who needs Reading Recovery as a literacy intervention. In interviews, Reading Recovery teachers were asked if their school was fully implemented or had plans to train more teachers in the future. If they responded positively to either question the standard was considered met. The standard was not met at the 80% criteria in 3 of the 5 years of the study. The research suggested “many schools in the scale-up fell short of full implementation because of the large numbers of students who need intervention” (May et al., 2016, p. 78). Fidelity, or commitment to full implementation, is often a long-term commitment to the standard, taking years to work toward full implementation due to staffing and financial constraints. It was not evident in the report if follow-up questions gave case study participants the chance to
explain their long-term commitment to fully implement Reading Recovery, even though in the short term their schools fell short of the standard.

**Student Selection**
The second area of concern at the school implementation level had to do with student selection, and this was discovered in Year 2. Based on teacher interviews, 78% of teachers reported that children with the lowest scores were selected for Reading Recovery. The Year 2 CPRE report (May et al., 2014) stated that students were often excluded from the intervention based on high absenteeism or special education status.

Reading Recovery has always mandated the selection of the lowest children (Clay, 1991; Clay, 1993; Clay, 1998; Forbes, 2001; Lose & Konstantellou, 2005; *A Principal’s Guide to Reading Recovery*, 2002, 2012), but the second-year report prompted Reading Recovery trainers to respond with a formal reminder for all implementations to recommit to this non-negotiable tenet. Trainers adopted a compilation of past guidance from a variety of Reading Recovery resources to provide further rationale for selecting the lowest students, now incorporated into *Standards and Guidelines of Reading Recovery in the United States, 7th Edition*, as Appendix C. As a result of this reaffirmation, in Years 3 and 4, fidelity was up to 84% and 88%, respectively.

**Timing of the Start of Lessons**
The third area of concern at the school implementation level had to do with the timing of the start of lessons. In Years 3 and 4, 25% of teachers reported that they were unable to meet the standard of administering the Observation Survey and beginning Reading Recovery lessons within 2 weeks of the start of school. Teachers reported that schoolwide assessment and support of teachers at the beginning of the school year made it difficult for them to test and begin Reading Recovery student lessons.

**Conclusion: Lessons Learned and Work to Do**
Just as Reading Recovery teachers work from a complex theory when teaching students, implementation requires a more-complex systems approach in schools. The i3 study has contributed to the field of education by providing a close look at the many aspects that contribute to a successful, national implementation of an intervention engaged in scaling up. The i3 study confirmed what Reading Recovery educators know from research and observations of the over 30 years of Reading Recovery implementation in the United States. In *Changing Futures* (Schmitt, Askew, Fountas, Lyons, & Pinnell, 2005), the authors identified critical factors of implementation that are parallel to the critical factors related to high-quality, successful implementation discussed in the i3 report (May et al., 2016). A summary of these factors includes the following:

- Informed, committed, and supportive leadership, formal opportunities for collaboration and communication, and resources are essential to successful implementations of Reading Recovery within a comprehensive literacy approach.
- Shared understandings of the purposes and process of Reading Recovery and responsibility for each child served are necessary for Reading Recovery’s success.
- Adequate coverage, or a fully implemented Reading Recovery intervention realized over several years, leads to a dramatic reduction in the numbers of children with literacy difficulties.
- Reading Recovery is an investment in teachers’ expertise. Reading Recovery provides both excellent initial and essential ongoing professional learning for Reading Recovery teachers.
- Data drives decision making and problem solving at every level in Reading Recovery.

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Reading Recovery is a collaborative venture. Marie Clay (2001) knew that for Reading Recovery to survive, the implementation model would have to take a systems approach — a redirecting system of support that would involve networks of people working together to problem solve issues focused on the needs of struggling readers.
The final i3 report provides yet another type of data which Reading Recovery professionals can examine to introspectively evaluate their own implementations and to discover suggestions for deriving the most benefit from their investment in teachers and children. Findings from the report have provided Reading Recovery stakeholders an opportunity to revisit these factors, problem solve, and take action.

The second lesson we might learn from the i3 report is that everyone has responsibility for fidelity to training, ongoing professional development, and teaching of children. Reading Recovery is a collaborative venture. Marie Clay (2001) knew that for Reading Recovery to survive, the implementation model would have to take a systems approach — redirecting a system of support that would involve networks of people working together to problem solve issues focused on the needs of struggling readers.

This i3 report provides another opportunity to objectively look at data at every level and work together to improve outcomes for the most educationally vulnerable learners.

References


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