

# The Design of Reading Recovery

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This article was written by Elizabeth Worden and M. Trika Smith-Burke from the presentation that Gay Su Pinnell gave at the Teacher Leader Institute in June 2000 in Minneapolis, Minnesota. Above, (L-R) Elizabeth Worden, Gay Su Pinnell, M. Trika Smith-Burke.

We in Reading Recovery sometimes think and talk about our work with a focus on children's learning and on how teachers encourage and facilitate that learning. At other times we focus on how teachers are trained and how to continue to refine teaching through continuing contact sessions. We also focus on how to get good results when Reading Recovery is implemented. But what each of us does is only part of the overall design that makes Reading Recovery work as an intervention—an overall design that is complex and elegant and is continually being revised and improved. Without this design, over 100,000 children a year would still be struggling as readers with inadequate systems of instruction.

The purpose of this article is to consider the design of Reading Recovery and our role in its future development. In the first part of the article,

we will describe the nature of the overall design and a set of qualities that must be embodied in any successful design. Then we will examine a case study of a teacher training site in Prince George's County, Maryland, through the lens of the overall design, pointing out what is functioning well and what the teacher leaders, teachers, and administrators are working to improve. Finally we will close with some thoughts that teacher leaders and site coordinators might ask when they examine how their sites are functioning. Each of us sees Reading Recovery from our own perspective and within our own worlds; however, we must be careful not to have tunnel vision. As Reading Recovery professionals, each of us contributes to our common purpose in immeasurable ways. Let us keep this broader vision in mind as we implement Reading Recovery and work to improve it.

## The Design of Reading Recovery

The true design of Reading Recovery is not commonly understood. It is consistently described as a tutoring program or an early intervention program. In reality, as part of a comprehensive literacy program, Reading Recovery is a systemic intervention created for the lowest-achieving first graders. Its purpose is to significantly reduce the number of these children at risk of literacy failure in first grade. It has an elegant structure consisting of four components:

1. an **instructional component** for the teaching of children,
2. a three-tiered **staff development component** for training teachers, teacher leaders, and university trainers,
3. an **implementation component** with guidelines and standards that help ensure effective implementation of Reading Recovery in school districts and schools, and finally
4. a **monitoring and evaluation component** that provides data used for evaluation and improvement. (See Smith-Burke, 2000, for a more detailed description of the four components.)

These four components interact synergistically to produce consistently effective results. Combined, they have the potential to integrate information

from new theory and research and new insights from practice to continually improve the program. Any Reading Recovery implementation must have all four components in place.

Often administrators who are not fully aware of the design are critical of Reading Recovery without understanding its complexity. For example, some attack it as too expensive, failing to understand Reading Recovery's role in a comprehensive literacy program and confusing coverage with effectiveness. Others say it is too hard to implement, finding it hard to understand why teachers need a full year of training or that teachers need to bring children to training class sessions in order to teach for their peers. Indeed, very few other interventions require live demonstrations. Even we ourselves sometimes get a kind of tunnel vision and focus only on one component without keeping the total design in view. The better we as Reading Recovery professionals understand the overall structure and design features of Reading Recovery, the more effectively we can communicate with administrators and teachers to work for better implementation. Further study of the design can help us to see when adaptations in implementation are warranted and to hypothesize how such adaptations might affect the design.

In our large-scale, rigorous research study at The Ohio State University, published in *Reading Research Quarterly* (Pinnell, Lyons, DeFord, & Seltzer, 1994), we explored the question: What makes Reading Recovery work? Our complex research design, using empirical methodology, nested experiments within schools. We randomly assigned students to

treatments. Our analysis of the data revealed

- **One-to-one Reading Recovery tutoring made a difference.** Students performed strikingly better in the one-to-one tutoring as compared to small-group instruction. The differences between single and group treatments could not have happened by chance, nor were they explained just by the one-to-one setting.
- **The lesson framework and instruction in Reading Recovery made a difference.** When Reading Recovery was compared to other one-to-one tutoring, the results were again significantly different. The Reading Recovery lesson framework and instruction epitomize the characteristics identified by a large body of research as effective teaching: a large amount of reading and writing; continuous letter-word, letter-sound learning; teaching for phonological awareness; word analysis; direct teaching with support for independence; and little time wasted. This teaching is all accomplished in a close and trusting relationship. As with the one-to-one setting, the lesson framework alone did not fully explain the results of Reading Recovery; that is, the framework was necessary but not sufficient.
- **Reading Recovery training made a difference.** We compared the results of Reading Recovery teachers with teachers trained by Reading

Recovery teacher leaders in a 10-day intensive, summer course (partially trained teachers). Students of fully trained Reading Recovery teachers performed in a strikingly different manner and made accelerated progress, while students of the partially trained or untrained teachers only made some progress.

Results of this large-scale study provide important information about how the instructional aspects of Reading Recovery contribute to its success. However, information about these elements provides only a few answers to the larger question. It is the total design, including all of these aspects of Reading Recovery and more, that creates and ensures the effectiveness of the program.

What is design? Design makes something work. Wilson and Daviss (1994) describe design as the way features of any human endeavor are constructed and work together. Design includes elements such as tools, time, human resource allocation, functions and attitudes of staff and stakeholders, communication and education, concepts, and philosophies. Within the design there must be mechanisms for *redesign* so that ongoing growth and development can lead to improvement—what the authors call the “redesign process.” Six qualities relate to the effectiveness of a design: functionalism, efficiency, effectiveness, scalability, dissemination, and diffusion. We will consider these six qualities, focusing on the four components of the structure of Reading Recovery discussed earlier in this article: instruction, staff development, implementation, and monitoring and evaluation.

### *Functionalism*

Functionalism means that the design is closely related to the purpose or function. Does the design work towards the purpose with no unnecessary features? Is it do-able? Is it possible for Reading Recovery to serve as a systemic intervention for lowest-achieving first graders?

From the instructional and implementation perspectives, Reading Recovery occurs in school settings before failure takes hold. Clinic settings usually take the child after failure has occurred. Working to prevent further failure, Reading Recovery reaches the lowest-achieving first graders before the extensive testing or labeling required for Special Education services. Also, Reading Recovery is not hard to implement. It actually fits the school day quite well as something extra for children and takes only a short amount of time each day. The materials are minimal, requiring only books, pencils, magnetic letters, and paper. When implemented appropriately by trained teachers, Reading Recovery works toward effective and efficient teaching of children, successfully discontinuing their lessons as soon as the children can read and write and benefit from classroom instruction independently.

### *Efficiency*

Using the criterion of efficiency we can pose the following questions. Is the desired effect produced with a minimum of effort, expense, or waste? How much energy is used to get the desired effect? Are minimum resources and energy expended to achieve high-quality performance? Is the result actual, not merely potential or theoretical?

Using a staff development, instructional, and data collection lens,

Reading Recovery is efficient teaching because it is done in a one-to-one setting. A teacher works with precisely what the child already knows as strengths to learn new literacy behaviors. Time is not wasted going over old learning. The daily lesson is just 30 minutes because earlier research showed that longer lessons provided no discernable benefit. By focusing on one child, the teacher is able to determine the next, most beneficial teaching point to move the child's learning forward. When the child has learned to read and write, lessons are discontinued for that child and another child is brought into the teaching slot.

Teacher training is efficient as well. Teachers learn as they actually teach children without long lectures. Training sessions and continuing education sessions last about 2 to 2.5 hours and include much interaction that helps create a communication network among teachers. By examining evaluation data, Reading Recovery personnel monitor whether time is being used appropriately.

### *Effectiveness*

For the criterion of effectiveness we can ask: Does it work? Are the results of staff development and student learning evident and clear?

Reading Recovery personnel monitor data collection at every level. We examine every component, using as our viewing lens the total design of Reading Recovery. Thus, we monitor how well the overall purpose of Reading Recovery is achieved, namely the significant reduction of children who are at risk of literacy failure in first grade. We accomplish this goal by examining the two positive outcomes of Reading Recovery: 1) children who successfully learn literacy

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Reading Recovery is unusual in linking staff development to student outcomes over time with the aim of improving the teaching of children.

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skills, and 2) children who are referred for further assessment (a very small percentage of those served).

Moreover, teachers monitor each child's progress daily through standard record keeping. In addition, teacher leaders monitor progress at their training sites through systematic examination of teachers' records. This process allows for problem solving to more effectively teach those children who are not making progress. Reading Recovery is unusual in linking staff development to student outcomes over time with the aim of improving the teaching of children. Teacher leaders also report data to administrators and board members in their districts. Administrators use analysis of the data to inform their decisions about implementation.

Trainers monitor teacher training sites in order to determine if support is needed to improve implementation. Data on every child served annually are also reported nationally. Clearly, data use is ongoing. A design that promotes effectiveness does not just monitor the innovation; it enables improvement and change. In this vein, four years ago, the data collection system was redesigned in order to collect additional information about implementation factors to aid the work of Reading Recovery professionals.

### Scalability

Scaling means changing size according to a fixed ratio or proportion while maintaining quality. When the scale changes, does the design allow the intervention to remain true to the original purpose, producing quality results?

A remarkable characteristic of Reading Recovery is its successful adaptation to various settings of scale and size. Researchers find Reading Recovery training classes and lessons are replicated with remarkable fidelity across cultural and regional groups, countries, and continents with remarkably similar results (Hiebert, 1994).

In terms of staff development and implementation, Reading Recovery has a key scaling-up mechanism: the preparation and work of teacher leaders. Clay (1987) calls teacher leaders the redirecting system that allows Reading Recovery as an innovation to be integrated into a system (a district or a school, or both). They not only train teachers, but also continue to teach children; communicate with stakeholders; collect, analyze, and report data; and problem-solve to ensure a quality implementation. Reading Recovery training classes are the basis of instructional quality,

along with the continuing education sessions that help teachers constantly refine their teaching.

### Dissemination

Dissemination means scattering seeds far and wide, propagating widely. Does the design allow the endeavor to spread widely?

The Reading Recovery design provides for dissemination in many different ways. Reading Recovery professionals contribute their live teaching for colleagues and anyone interested in learning more about Reading Recovery. Each teacher training site disseminates an annual report of its activities and data showing results with children. Both university training centers and teacher training sites welcome interested visitors. In addition, the Reading Recovery Council of North America (RRCNA) facilitates the dissemination of information through its publications, Web site, and national conference. Trainers and teacher leaders publish articles related to teaching and implementation in *The Journal of Reading Recovery* and research articles in *Literacy Teaching and Learning*. They publish in other national journals and books as well. The National Reading Recovery Institute, sponsored by

RRCNA, and regional conferences, sponsored by university training centers across the country, also spread the news.

### Diffusion

Diffusion means an intermingling of molecules. In anthropology, it means spreading a cultural or technological practice or innovation from one region or people to another. The innovation becomes so much a part of a system that the people there begin to believe that they invented it themselves. Some researchers might use the label *institutionalizing*, which means that the innovation is no longer perceived as an innovation but instead as an integral part of the system. The question is: Does the design allow the innovation to become an integral part of the system?

From an implementation perspective we could ask, "Can Reading Recovery achieve this kind of diffusion? Can it become an integral part of a system without losing its integrity, its rigor, or the essential aspects of its design?" Although we're at varying stages of institutionalization district-by-district in the United States and Canada, the Reading Recovery design does have the potential for diffusion because all of the other design elements are in place. Full diffusion has been very nearly realized in New Zealand only after years of continuous work to monitor and improve the instruction of children; the staff development of teachers, teacher leaders, and trainers; the data collection process; and the conditions of implementation.

Now let us turn to a case study of the Prince George's County, Maryland, district in the United States, where the educators are working toward diffusion.

**Table 1.**  
Demographic Profile of Prince George's County

African-American	75%
Caucasian	15%
Hispanic	6%
Asian	3.5%
Native American	.5%

**Table 2.**  
 Status of Reading Recovery Teachers and Teacher Leaders in Prince George's County Site, 1993–2002

Year	Reading Recovery Teachers		Reading Recovery Teacher Leaders	
	Number Trained	Number Still Teaching	Number	Number in Training
1993–1994	12	8	1	
1994–1995	13	5	1	3
1995–1996	46	22	4	
1996–1997	38	14	4	
1997–1998	39	21	3	2
1998–1999	49	37	5	
1999–2000	42	37	3	
2000–2001	34	37	3	2

## Reading Recovery in Prince George's County: A Case Study of Innovative Design

### *Information About the District*

Prince George's County is the largest school system in Maryland and the nineteenth in the nation, serving more than 127,000 students in 182 schools. The current population is extremely diverse, with approximately 75% African-American, 15% Caucasian, 6% Hispanic, 3.5% Asian, and 0.5% Native American students (see Table 1). The district has a bi-modal population of middle-class and low-income families. Although the county has the largest middle-class African-American population in the nation, the poverty level of the student body (as measured by the number of students receiving free and reduced price lunches) is approximately 65% at the elementary level. The system is experiencing rapid growth, adding to the student popu-

lation by over 3,000 children in 2000–2001. It currently employs approximately 24,500 individuals, including more than 8,200 teachers. The district is planning to open six new schools in 2002–2003.

### *Implementation of Reading Recovery in the District*

The district started to implement Reading Recovery about nine years ago. At approximately that same time the superintendent implemented a fact-finding mission about intervention and prevention programs in literacy for young children. The district had strong and committed leadership for Reading Recovery, which was selected to be implemented as the early intervention in their literacy initiative. The district was extremely lucky to find a trained teacher leader who had recently moved to the area. The county then trained three more teacher leaders in 1994–1995. When the first teacher leader had to leave

the district because of her husband's transfer, the district not only replaced her but also added another by training two more teacher leaders in 1997–1998.

In the first year of training of 12 Reading Recovery teachers, the participating principals used several available funding sources to pay for their training. The cost was the half-salary (teachers taught Reading Recovery children for one-half of their duty day) plus benefits for each teacher trained. The funding sources used were Goals 2000, Evenstart, Equity 2000, AmeriCorps, other Title funds, and staff development budgets. In 1994–1995, 13 more teachers were trained. Between fall 1995 and spring 2001, a total of 248 additional teachers were trained (see Table 2).

In all districts there is a turnover in teachers, and Prince George's County is no exception. Some Reading Recovery teachers have moved into

**Table 3.**  
Analysis of Status of Reading Recovery Teachers Not Active in Prince George's County as of June 1999

Year	Retired	Maternity/ Sick Leave	Left School System*	Promotion	Returned to Classroom	Left Reading Recovery
1993–1994	3	–	1	–	–	–
1994–1995	1	1	2	2	–	2
1995–1996	3	2	9	2	–	8
1996–1997	2	2	13	2	–	4
1997–1998	3	–	10	3	2	–
1998–1999	–	–	10	–	–	2
1999–2000	2	1	21	2	2	5
2000–2001	2	2	11	2	2	8

\* of the 77 teachers who have left the system through 1999, 27 are teaching Reading Recovery in their new school systems.

other roles such as principal or staff developer; some have retired or are on maternity or sick leave; a few have moved back into classroom teaching; others have left Reading Recovery as an assignment. When Reading Recovery teachers move into other positions they bring their knowledge about early literacy with them, adding expertise in whatever new role they play. Other districts, which often offer higher salaries, have enticed 77 Reading Recovery teachers to leave the district (see Table 3). Of this group, 27 are teaching as Reading Recovery teachers in their new school systems.

Currently, the district has a 5-year plan for Reading Recovery as the early intervention component in their literacy initiative. The goal is to reach full implementation by 2001–2002 in “a minimum of 100%” of the elementary schools with dedicated positions to ensure program effectiveness

and with continued monitoring and evaluation to determine Reading Recovery's impact upon student achievement. The vision is to maintain this level of coverage from 2002 to 2005. A new policy of reducing class size in the primary grades caused a shortage of primary classroom teachers in the fall of 2000 and some Reading Recovery teachers had to shift to classroom teaching. The class size reduction policy, while important and critical to the system, is an extra challenge to the goal of full implementation, as is the 15% attrition rate in Reading Recovery teachers each year.

In this district, Reading Recovery has been very successful in student outcomes. Discontinuing rates range from 65% (in the first year) to 78% of total students served. For example, if a teacher discontinues two rounds of children (a minimum of 8 children) and then takes in a third round

(4 more children) the discontinuing rate would be 66.7%. This percentage of total children served will vary depending on the level of teacher coverage in a school and on how many children fall into the other categories: children with an incomplete program, children referred after 20 weeks for further assessment, children who have moved, or children who have been removed from the program for other reasons and for whom a memo of explanation is required. Most of the years the district has implemented Reading Recovery, the percentage of children discontinued has been in the 70% range. Also, the number of children served has steadily increased as the number of county schools involved in the implementation has continued to grow (see Table 4).

Implementation of Reading Recovery in the district began in only 12 schools but has expanded to include

118 schools. The future challenge, as proposed by the superintendent, is to bring each school up to full coverage so that all of the children who need Reading Recovery service have access to it. The teacher leaders estimate that in order to accomplish this goal, 20% to 30% of all first graders will need Reading Recovery services.

### *Staffing Models for Reading Recovery Teachers*

Principals have considerable power as to whether they opt for Reading Recovery or not; however, there is a big advantage in selecting it, since the central office has dedicated funds to provide for Reading Recovery teachers. No single way exists to utilize Reading Recovery teachers during the other half of their school day. A flexible policy allows schools to select the model that best fits each school.

### *The Complex Role of the Teacher Leader*

The teacher leader team has developed monitoring and communication

systems for efficiency and effectiveness. Monthly, they collect data and look at all information on Reading Recovery teachers and children. They note children who are progressing slowly and schedule visits to these teachers to problem-solve. They generate a list of teachers who need more support in order to help them continue to develop knowledge and improve their teaching. Monitoring and teacher development go hand in hand. Discontinuing children is a driving force in this district.

The school system doesn't just ask, "How many teachers were trained this year?" or even "How many children were served?" It asks, "How many first graders went to second grade reading and writing?" Children are the clients!

The teacher leaders in this county still consider themselves students. They constantly strive to learn more about how to teach children, how to teach teachers, and how to support the development of a successful com-

prehensive school literacy program. The teacher leaders recognize that Reading Recovery is in the process of moving towards its goal. In 1999–2000 Reading Recovery reached about 10% of the target population in the district. In 2000–2001 it had expanded to reach 15% of all first graders. The biggest change is occurring where schools are providing 25% of the first graders with Reading Recovery and have classroom teachers working to improve classroom teaching as well. In these situations very few children leave first grade without being good readers and writers.

### *Staff Development for Primary Classroom Teachers*

In 1994–1995 the district also began a trial of early literacy training for K–1 classroom teachers. Ten modules or sessions addressing topics such as Guided Reading, Running Records, How Words Work (spelling and decoding), Interactive Writing, Guided Writing, Classroom Centers, and Class Management were devel-

**Table 4.**  
Reading Recovery Program Data: Children Successfully Discontinued in Prince George's County, 1993–1999

Year	Total Number of Children Served	Total Number of Children Discontinued	Discontinued as Percentage of Total Served	Total Number of Schools
1993–1994	99	65	65%	12
1994–1995	155	155	78%	19
1995–1996	557	394	71%	45
1996–1997	812	620	76%	61
1997–1998	1,035	782	76%	73
1998–1999	1,257	908	72%	95
1999–2000	1,424	932	65%	111
2000–2001	1,512	993	66%	118

oped and offered. The trial was carefully evaluated. As a result, the modules were offered district wide in the next academic year. In 1997–1998 the modules were expanded for second- and third-grade teachers, adding topics such as Readers and Writers Workshop and Fluent Reading, and placing more emphasis on topics like State Standards. With an emphasis on improving primary classroom teaching and with Reading Recovery as the early intervention component, the county now has the foundation of a comprehensive literacy program in place and can continue to build up through the elementary grades. Reading Recovery's value to the district has increased through its support of the early literacy staff development. The teacher leaders, however, walk a fine line, always placing priority on their role in Reading Recovery, while simultaneously supporting ongoing staff development for classroom teachers.

#### *District Challenges to Reading Recovery in Prince George's County*

Despite the multilayered investment, Reading Recovery is quite fragile in Prince George's County. It won't disappear tomorrow, but it could be seriously challenged without constant vigilance and problem solving by the teacher leaders and administrators as issues arise. For example, given the new policy of class size reduction and the primary-grade teacher shortage, the teacher leaders had to do some creative problem solving in order to provide coverage in schools in which Reading Recovery teachers were needed for classroom teaching. Also with attrition at approximately 15%, the teacher leaders have made a case each year to replace Reading Recovery teachers who have moved to other responsibilities. The challenge in the

past three years has been to serve the expanding number of teachers and students with a shortage of teacher leaders. In 1999, two teacher leaders left the system too late to train replacements for the academic year 2002. Consequently the teacher leader team had to set priorities and be even more efficient to cover the work load, as well as make a case to train two more teacher leaders. This year two teacher leaders are in training to meet that need.

Another issue that surfaces when individuals want to help the intervention *look better* is the questioning of a foundational standard of the design, namely to take the lowest-achieving children. Teacher leaders have had to intervene and explain that without taking these children, the effectiveness of the design is seriously threatened. If the lowest-achieving children are not taken, they are the ones who will come back to haunt the district in later years on state testing, since they will never catch up. In order to implement the design effectively, teacher leaders have had to

- continue to teach the lowest-achieving children themselves,
- monitor the selection process,
- be available early in the children's series of lessons to assist teachers, if needed,
- strategically target their visits and continuing contact sessions to help teachers with children who are hard to teach, and
- work with teachers who are less successful in discontinuing children.

In addition, the teacher leaders work hard to ensure good communication across the district about Reading Recovery. Communication is the glue that helps make the design work, and it is never finished. Every year new staff must be educated about Reading Recovery. To accomplish this goal, a plan is built into the system, along with a system to recruit next year's class for Reading Recovery.

Administrators also come and go. Given the central office administrators' role in setting literacy policy for the county and the importance of the principals' leadership and commitment in schools, the teacher leaders must work to educate and communicate with all of these stakeholders.

With the advent of site-based management in the county has come another communication challenge. Reading Recovery teachers and teacher leaders have had to educate intermediate-level teachers, parents, and specialists as well as primary teachers about the important role of Reading Recovery as early intervention. This can be a difficult task when any one of these constituencies has limited resources and other programs that they would like to see implemented. Without knowledge and commitment, Reading Recovery may be threatened in any one of the arenas previously mentioned. The overall design must include constant communication, as the teacher leader team in Prince George's County knows well.

#### *The Critical Roles of the Teacher Leader Team*

Monitoring the Reading Recovery personnel within the county and keeping communications among the groups current can generate an overwhelming workload. So the teacher

leaders in the county have developed ways of tracking students' progress. Efficient systems for getting out to teachers in need of support have been developed as well. Monitoring activities and continuing contact with teachers must be visible so that the district leadership understands that they are part of an ongoing process that contributes to the success of Reading Recovery. Teacher leaders must always anticipate the need for more teachers, replace teachers who leave, add new teachers to bring schools closer to full coverage, and advocate for replacing and training more teacher leaders. Long- and short-term planning is crucial, as are revisions in response to new district policies or modifications in the district budget, or both. They also keep an eye on budget deliberations in the district so that a case can be made to implement the superintendent's goals for Reading Recovery. Wild-card curricular issues such as the current pendulum swing towards phonics may arise and must be addressed in a balanced and timely manner.

Part of the uniqueness of Reading Recovery is its extensive data collection at multiple levels, which becomes yet another responsibility for teacher leaders. They use data to monitor teacher and student progress. It is their job to help Reading Recovery teachers use their lesson data to make more powerful teaching decisions to shift student learning forward during training and in continuing contact sessions. Teacher leaders also help teachers write the school reports that help principals and administrators focus on how the lowest-achieving children are doing in each school, the level of coverage, and what school needs will be in the next year. As compared to other programs,

a major difference in the design of Reading Recovery is that the data are not used for evaluation alone. Data are also used to improve the teaching of children, to improve teacher training, and to improve implementation of the program.

The interaction of the four design components gives the total design of Reading Recovery its power. The teacher leader plays a key role in making the system work. Teacher leaders provide the professional development that enables teachers to provide excellent teaching. They monitor the results closely. They work with classroom teachers, school administrators, and district-level personnel to examine and monitor the delivery systems that make Reading Recovery work efficiently. It takes leadership, communication, collaboration, and commitment among all of these individuals—administrators, Reading Recovery professionals, classroom teachers, specialists, and parents—to achieve the integration of an innovation into the system so that it can be available to all children who need it.

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