To better understand teacher change, a study considered the classroom practices and beliefs of four teachers who were being trained as Reading Recovery teachers. The teachers were observed and interviewed over a 2-year period. Observations were elaborated as field notes; interviews were transcribed. A constant comparative method was used to identify patterns in the data. Findings suggest that teachers' beliefs and practices were embedded in and tied to broader contexts, and that, within these contexts, teachers held a succinct set of beliefs. Changes began as experiments, and teachers used their personal beliefs to determine whether something "worked." All four teachers tried similar practices and language, and there were both similarities and differences among the ideas they tried. Two of the teachers reorganized their belief systems based on a new, transformative belief they developed during the study. These findings suggest that teacher educators need to rethink the approaches they currently use for preservice and inservice education, as those approaches do not consistently take into consideration the complexity of the change process nor do they consider the contexts of teachers' professional lives. (Twenty references are attached; appendixes contain questions for an initial and a final interview with the teachers). (Author/NKA)
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TOWARD UNDERSTANDING TEACHER CHANGE

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Abstract

To better understand teacher change, we studied the classroom practices and beliefs of 4 teachers who were being trained as Reading Recovery teachers. We observed and interviewed the teachers for 2 years. Observations were elaborated as field notes; interviews were transcribed. A constant comparative method was used to identify patterns in the data. Findings suggest that teachers' beliefs and practices were embedded in and tied to broader contexts, and that, within these contexts, teachers held a succinct set of beliefs. Changes began as experiments, and teachers used their personal beliefs to determine whether something "worked." All 4 teachers tried similar practices and language, and there were both similarities and differences among the ideas they tried. Two of the teachers reorganized their belief systems based on a new, transformative belief they developed during the study. These findings suggest that teacher educators need to rethink the approaches they currently use for preservice and inservice education, as those approaches do not consistently take into consideration the complexity of the change process nor do they consider the contexts of teachers' professional lives.
TOWARD UNDERSTANDING TEACHER CHANGE

In the last several years, a number of individuals have suggested that American schools are in trouble and that our educational system needs to change. Although the solutions offered have been diverse and, indeed, sometimes diametrically opposed ("Control the curriculum through tests" vs. "Teacher empowerment"), there does seem to be a general consensus that teachers play a powerful role in the school improvement process. Indeed, several researchers have concluded that it is the teacher, not the method, that makes a difference. As Connolly (1988) argues: "studies of school reform, and resistance to it, yield a view of teacher agency such that curriculum plans, whether of milieu, subject matter or learner, flounder or prevail on the activities of the teacher" (p. 10).

If we want to improve schools then, it is important to understand more about teachers and about the role they play. It is also important to understand how teachers change and grow so that we, as teachers and teacher educators, can make informed decisions about how best to support the change process.

Several researchers have conducted studies designed to help the field better understand the change process. One group of these studies, which Richardson (1990) refers to as "teacher change" studies, has examined how teachers change in response to externally mandated changes. Richardson argues that these studies have been conducted "for purposes of changing the education system at the state, school district, or school level" (p. 11). A second group of studies, which Richardson refers to as "learning to teach" studies, attempts to understand how teachers think at different stages of their careers and what accounts for how teachers think about what they do.

Our interest, as researchers and teacher educators, was more consistent with the "learning to teach" perspective. We wanted to become better teachers of teachers, and we believed that studying how other teachers grew professionally would help us improve our own teaching. We also hoped that what we learned would be useful to others interested in professional development--teachers, teacher educators, and other public school and university educators.

We reviewed the "learning to teach" literature in order to understand what was already known. We found several studies that explored the thinking processes of teachers (e.g., Anning, 1986; Bussis, Chittenden, & Amarel, 1976; Cain, 1989; Clandinin, 1986). A subgroup of these studies examined past influences on teachers' current practices and reported, for example, that prior teaching experiences have a major impact on current practices (Anning, 1986; Clandinin, 1986; Elbaz, 1983; Holt & Johnson, 1988).

While we found it helpful to understand what factors teachers believed had influenced their teaching, we wanted to understand the change process as it occurred. We wanted to understand how teachers made sense of information as they encountered it in their professional lives and what impact that information had on their practices. We thought that this knowledge would enable us to understand better how to be helpful as teachers of teachers.

We therefore set out to design a study that focused on the process of teacher change. In planning the study, we were particularly sensitive to one of the criticisms that have been raised about this kind of research--that researchers sometimes emphasize their perspectives at the expense of the teachers' perspectives. The findings of those studies are often not very helpful to teachers in schools. As Bolster (1983) admonished:

[Most such research, especially that emanating from top-ranked schools of education, construes teaching from a theoretical perspective that is incompatible with the perspective teachers must employ in thinking about their work. In other words, researchers and school teachers adopt radically different sets of assumptions about how]
to conceptualize the teaching process. . . . If researchers are to generate knowledge that is likely to affect classroom practice, they must construe their inquiries in ways that are much more compatible with teachers' perspectives. (p. 295)

Because we wanted our research to generate this kind of useful knowledge, we used research methods and a research design that would allow us to understand and highlight the teachers' perspectives, not our own. Instead of limiting data collection to information that would allow us to test our hypotheses ("Yes, pattern X occurred"; "No, it did not"), we gathered information more broadly and then looked for the patterns in the data we collected. Because we wanted to get to know the teachers and to understand their practices, we chose interviews and observations as our primary means for gathering data. Research pairs consisting of a public school teacher and a member of the university-based research team were formed. For 2 years, the university researcher visited the teacher's classroom and talked with the teacher about what she was observing. Because we were interested in change that happened as a matter of teacher choice, not mandate, we chose teachers who were involved in learning something new, but who were not being asked to change their classroom practices based on what they were learning. For this and for three other reasons discussed below, the teachers who participated in this study were teachers who had chosen to be trained as Reading Recovery teachers. The study began just prior to their training year.

**Why Reading Recovery Teachers?**

Reading Recovery, developed in New Zealand by Marie Clay, is designed to accelerate the progress of first-grade children who are most at risk of reading failure. The goals are to help the children read at levels "commensurate with their average peers," to do so in the least amount of time, and for the children to continue to improve their reading performance after discontinuing the Reading Recovery program.

To achieve these goals, each child receives half an hour of daily instruction from a specially trained Reading Recovery teacher. Clay explains that the success of Reading Recovery is contingent upon a teacher's skills in implementing what she refers to as a "superbly sequenced programme determined by the child's performance, and to make highly skilled decisions moment to moment during the lesson" (Clay, 1985, p. 53).

To learn how to design such a program and to make these "highly skilled decisions," teachers enroll in an intensive year-long training course that includes (a) 30 hours of assessment training prior to the beginning of school, (b) a weekly inservice class, (c) daily teaching of 4 children, and (d) school visits. This daily teaching occupies half of the teachers' workday; the other half of the day, they teach in their regular classroom, usually first grade or Chapter 1.

We had four reasons for believing that studying Reading Recovery-trained teachers would help us better understand the change process. First, we hypothesized that much of what teachers would learn in Reading Recovery would be relatively new to teachers. Thus, we would have the opportunity to understand the impact of what teachers might regard as new information. Second, the Reading Recovery training program lasts an entire school year. We would, therefore, be able to work with teachers who we could reasonably predict would be more and more familiar with this new information. That would enable us to learn about teacher change as teachers' understanding of new information began to broaden and deepen. Third, Reading Recovery is reported to have a very high success rate. Children who are discontinued from Reading Recovery continue to function for several years at the average reading level of their peer groups (Clay, 1985). We therefore hypothesized that teachers, caring about the success of children, would value what they were learning.
The fourth reason was particularly salient: The Reading Recovery training program is not designed to affect or improve classroom practice. Indeed, teachers-in-training are advised that "most children (80 to 90 percent) do NOT require these detailed, meticulous and special reading recovery procedures or any modification of them. They will learn to read more pleasurably without them" (Clay, 1985, p. 47). Therefore, if teachers changed their beliefs or classroom practices during or as a result of their training, and we had anecdotal evidence that suggested they did, it would be because the teachers themselves were making connections between what they were learning in Reading Recovery and their regular classroom practices. Any change would, therefore, be a choice, and perhaps a by-product, but not an intended outcome. As educators who regard teachers as professionals, we felt this was very important. We were not interested in understanding how teachers changed in response to a mandate, but rather how teachers changed when they were in control of the change process. Studying Reading Recovery teachers-in-training seemed to provide us with this opportunity, in that the teachers were learning information that we predicted would be new and valuable to them, but they were not being told to use that information to change their classroom teaching practices.

Our predictions were subsequently supported by the data. Before the training began, all of the teachers in this study told us that they had chosen to receive training in Reading Recovery because they hoped that by doing so, they would be better able to help children. Once the training had begun, teachers reported that what they were learning in Reading Recovery was new, that they understood more and more as the year went on, and that they valued what they were learning. Over the 2 years of the study, they also chose to make changes in their classroom practices—changes which they were not specifically asked to make.

Beginning the Study

During the first year of the study, 24 teachers were being trained as Reading Recovery teachers at the University of Illinois. Sixteen teachers were randomly selected to participate in two professional-development studies. Eight teachers were not included in either study. Professor Janet Gaffney, the director of Reading Recovery in Illinois, asked 8 of the teachers-in-training to participate in a study about Reading Recovery; she asked the other 8 to participate in this study. Four of the 8 were classroom teachers; the other 4 taught Chapter 1. The 8 teachers were each subsequently paired with a member of the research team.

Collecting and Analyzing Data

When we met with the teachers before the training year began, we used a semistructured interview format to explore their beliefs and practices. Examples of probes we developed for that interview are provided in Appendix A. Our task was to understand, prior to the start of Reading Recovery training, how teachers described their teaching and to understand their reasons for teaching as they did. Next, we visited their classrooms, observing for half days—twice in the first week or two of instruction, and then several other times throughout the year, at approximately 6-week intervals. After each observation, we had conversation-like interviews during which we sought to understand how teachers thought about the practices we had just observed. We also explored questions, generated in research team meetings, that we felt would be important for us to ask to better understand teachers' ideas and beliefs. For example, we asked variations on such questions as "What do you think makes you a successful teacher?" "How do you know you've had a good day?" and "Does this classroom represent your ideal?" In these conversations, teachers also talked with us about the training process itself as well as about making sense of the new information they were encountering in Reading Recovery. At the end of that year, we again scheduled semistructured interviews (see Appendix B for probes).

During the second year, we repeated the pattern of data collection, observing teachers 3 to 4 times that year. During this second year, changes on the research team required some changes in the teacher-
researcher pairs. There were also classroom-based changes. One teacher, for example, taught Reading Recovery full time instead of part time; another left the classroom to work full time in the library. Because of these changes, we focused our analysis of the data from all 8 teachers on the more consistent, and therefore more trustworthy, data: data collected by the same member of the research team throughout both years and which was from the 4 teachers who remained in their classrooms over the 2 years of the study.

All interviews, however, were transcribed, and all field notes were elaborated. Copies of initial interviews and observations were returned to the teachers for their comments. In so doing, we hoped to establish a trustful relationship between teacher and researcher as well as increase the trustworthiness of our data (Guba & Lincoln, 1981).

During the first year of data collection, the research team met weekly to discuss field experiences, Reading Recovery, and research methodology. In this way, analysis became a part of data collection. What we observed and talked about in one visit informed subsequent observations, interviews, and discussions.

In our initial attempts to make sense of what we were seeing, we found ourselves looking for effects of Reading Recovery in our data. Indeed, it was common for members of the research team to ask Reading Recovery personnel if the practices we had observed were from Reading Recovery. However, we soon came to see that this perspective was limiting our ability to see. We began, instead, to focus on understanding each individual teacher over time. We searched for and identified patterns in the data and then used those patterns and our data to write narratives at three different points in the first year: We wrote about the teacher as she appeared at the beginning of the year, we analyzed and described changes over the first half of the year, and, at year's end, wrote to put the year in perspective.

Our narratives were grounded in the recurring patterns we had identified in the data (Glaser & Strauss, 1967; Strauss, 1987). While the details of marking patterns varied from researcher to researcher—one wrote marginal notes, another used Post-it notes, a third maintained a researcher response log that paralleled the data—the method of analysis was the same. We each looked for, made note of, and investigated possible patterns in the data. For example, early in the first interview with Frances, the researcher asked for details about how she taught reading in Chapter 1 the previous year:

R: Then they come to you, and what do you do with them? Let's take the first graders for example.

F: I'd say the first three weeks, we worked on letter recognition. They love to play Around the World, which is where you have one of the kids stand behind the other and you flash a card, say the A, and whoever gets it first moves on to the next person. But it's always, uhm, sometimes you have to be real careful with that game because the people can get their feelings hurt, is what I found out . . . if you never experience getting up and moving . . .

R: So I come in, I'm your student, and we begin with this letter recognition game . . .

F: Right.

R: Are all of these children relatively similar in their capabilities?

F: Yes. All of mine came from the same classroom, the same reading group.

Frances, First Interview, Year 1
This exchange formed the basis for a number of questions and hypotheses. In this particular excerpt, for example, we wanted to know about Frances's rationale. Did she believe that knowing letters was an important part of reading instruction? Might she believe in a sequence of skills (e.g., letters first perhaps, then letters and sounds?). Did she consistently think that children in the same reading group had the same needs? We also noted her use of a game and wondered about the methods she used to teach children. We noted these questions (in the margin, on Post-It notes, or on the computer) and continued reading, adding to our list of hypotheses/questions.

We also began to identify patterns. Several times in that first interview, for example, Frances talked about children needing to know their letters and their sounds and to develop a sight vocabulary. Indeed, she noted that she thought that her classroom had "an equal balance between phonics and learning words by sight." Having identified this emphasis as a possible pattern, we reread first interview, looking for evidence that would confirm or deny the pattern. In this case, the pattern was confirmed. In subsequent interviews and observations, we read and watched to see if this pattern would hold or change. Eventually, nearly convinced that the pattern was trustworthy, we reread all the data from Frances to see if we could find counter-examples and so disconfirm the pattern. We could not. In this manner, we identified patterns that held for each teacher.

We also looked for patterns across teachers. For example, in the fall of the first year we noticed that several of the teachers started asking their students, when they were reading aloud, "Does this make sense?" We thought this expression might have come from their Reading Recovery training, so we began to wonder about teachers' language. Did teachers use different language over the course of the first year? Over both years? If so, was the change in language related to what they were learning in Reading Recovery? We also began to wonder about the instances in which the language seemed to stay the same but the meaning changed. Then, too, there were times when the language changed, but the meaning seemed to stay constant. To investigate these questions, we returned to the data, looking for changes in language and/or meaning as well as whether or not the teachers attributed those changes to Reading Recovery. This recursive pattern continued until we felt that we had identified the most salient patterns across teachers.

The second year, we simultaneously collected and analyzed new data, as well as continued the analysis of the first year's data, using the same constant comparative method (Glaser & Strauss, 1967; Strauss, 1987).

Throughout our analysis, we consistently encountered the type of complexities noted above and came to understand that it was necessary to explore all observable changes--shifts in language, materials, classroom practices or organization--relative to the meaning of that change. It became clear that not doing so could result in misrepresenting what we had found. For example, if we were to report only that the language of the teachers changed, without having investigated and reported on the meaning of the language change, we might have created the impression that conceptual change had occurred when it had not.

These differences can perhaps best be understood by considering one feature common to all 4 teachers: the increased use of trade books. Our analysis suggested that there were differences among all 4 teachers relative to what this change meant. Consider for example the differences between the meaning for Annabelle and for Betsy.

Annabelle had originally been trained as a special education teacher, and, prior to taking a leave of absence 2 years before our study began, had spent 13 years teaching junior high children labeled Educably Mentally Handicapped. When she returned from her leave, she taught language arts part time for a year and then, during the first year of our study, taught first grade full time. Because of her leave,
Annabelle lost her seniority and, at the time of our study, considered her job security somewhat unstable.

Within this framework, Annabelle described herself as someone who tried to "go along." There were also times when Annabelle did not "go along," times when she strongly advocated, and acted upon her particular convictions. However, increasing the number of trade books happened to represent one of the occasions in which Annabelle "went along." Annabelle explained that she went along with using more literature because two of the other teachers in her building, people that Annabelle "really respected" and whom she believed "kind of set the tenor for the school," both began using a literature-based approach in the second year of this study. Having made the decision the year before to do so, these two teachers had contacted the district office and found out that they weren't required to use workbooks, and so used workbook money to buy big books. Over the summer, they also acquired multiple copies of several books as well as a number of other big books. Annabelle explained:

[They] must have made 20, 30, [big] books, that [they've] been nice to share with all of us. And now those particular women . . . have [other books] all in a plastic bag with labels and how many books are in a group. And we can go in there and pull out a [big] book, a packet of books, and then go in and use them in our room.

Annabelle, Final Interview, Year 2

Because other teachers made the materials easily available, Annabelle began using more trade books. She noted, however, that although she believed in literature-based instruction, on her own she "probably wouldn't have brought in more literature . . . it takes too much time."

At the same time that Annabelle agreed to the trade books, she also went along with the syllabus provided by the Chapter 1 teacher, which listed the skills that were to be taught with the basal stories each week. Annabelle explained that she did so "because we are supposed to go along with them and it's part of the system within the school district that we have to agree to help out as much as we can."

This meant that Annabelle and the children went through the basal "really slowly," reading two stories a week. She thought the pace was set so that the children would "see the words twice or even three times." The children were also asked to take a book home with them. Annabelle felt that this was "fairly boring" for the children because the "stories . . . aren't real fun" but noted that, "if they read at home the way they are supposed to, they may read that story three times . . . it allows for fluency, it allows for sight words."

As another part of going along with Chapter 1, Annabelle taught skills within the context of the story. One week, for example, Annabelle worked with the children on the /ng/ sound:

Monday I gave them some paper and we worked on it. I dictated some words to them. And I had some little boxes on the board so I said if you're still confused look up at the boxes. And there'd be three or four heads and I looked to see who it was. And they were the people I suspected. And all but about two kids did a fairly decent job of /ng/ . . . So I'm going to keep plugging away at that.

Annabelle, First Interview, Year 2

Annabelle explained that she thought this skill work was "a fairly boring thing"; however, by doing the skill work, it helped "keep [my] indebtedness to Chapter 1, plus get my Reading Recovery stuff in."

For Annabelle then, using more literature (such as using the basal), teaching isolated skills, and trying to get Reading Recovery "stuff" into the classroom, was part of what Annabelle meant by "going along."
For Betsy, the increased use of trade books held different meanings. Betsy had been teaching first grade for 7 years, using Distar, a whole-class, direct-instruction, phonics-based approach to reading instruction. Betsy believed in and supported direct instruction and Distar; indeed, she had served as a consultant for Distar and had taught the program to others. Before teaching first grade, she had taught Chapter 1, remedial, and regular kindergarten. She noted that for all 12 of those years, she had used some form of direct instruction.

Toward the end of the training year, however, Betsy began doing less Distar and brought in more trade books. She also began to involve the children in more writing. Betsy had been doing a great deal of professional reading during this time and she had started to value the fact that children needed extensive exposure to reading and writing in order to become readers and writers. As she explained:

A lot of my learning not only comes from Reading Recovery. You have to understand that, on this change. I have read millions of books and articles . . . . You learn by reading and reading and reading. Reading about new people, I mean, how people do things, getting ideas, why do they do things, and then just reading all kinds of different materials. I took that on myself.

Betsy, Final Interview, Year 1

After the training year, Betsy decided that she wanted to experiment more with some of the things she had been learning and, therefore, transferred to another school, a school that did not mandate Distar. Thus, during the second year of the study, Betsy was in a new school, teaching half-day kindergarten in the morning and Reading Recovery in the afternoon. As a kindergarten teacher, Betsy felt relieved of the responsibility to teach reading. She also did not feel the pressure to have the children score well on end-of-the-year standardized tests, tests that first graders had to take, but that kindergarten children did not. In these circumstances, she felt free to try out some of the ideas she had been reading about. Because she felt it was important for written language to be a part of children's lives, she had the children write every day, she read to them daily from trade books, and provided opportunities for independent reading and writing. Betsy believed that by immersing children in print, by helping them become familiar with stories, and by helping them understand both reading and writing as meaning-making processes, she was laying the foundation for future reading success.

By mid-year, Betsy reported that her kindergarten children were writing as much or more than her first graders had been by the middle of their first-grade year and that the kindergartners had made sense of writing. They understood "what writing was." A few months later, in March, Betsy reported that the children were all reading "at the end of first-, beginning of second-grade level, or higher." Betsy was surprised by this. She had not intended to teach the children to read, had not provided "any formal instruction in reading," but rather had tried to provide a foundation for later reading success. She noted that her approach had been "more powerful" than she had originally thought and was amazed that she had gotten these kinds of results "by just reading a book and giving them a blank sheet of paper." To understand even more about how children learned, Betsy decided that she wanted to teach full-day kindergarten, rather than half-day, and subsequently, the year after the study ended, no longer participated in Reading Recovery. In Betsy's classroom, then, the increased use of trade books was closely tied to beliefs that Betsy was exploring about how children learned to read and about how teachers could support that process.

To ferret out these kinds of similarities and differences in meaning, we returned to the data often, looking for patterns and testing out hypotheses in an attempt to understand better the process of teacher change.
Patterns in the Data

Based on our analysis of the data from 4 teachers, we have, to date, generated 8 characteristics of their change process:

1. At the beginning, and throughout the study, all 4 teachers had a distinctive set of beliefs about reading, readers, teachers, and teaching—beliefs that they talked about in interviews and whose influence was evident in their practices. At the beginning of the study, these beliefs included, but were not limited to:

   - Annabelle’s concern that there were certain words and skills children needed to “get” before they went to second grade and her conceptualization of teaching as “present it, see who gets it, go back over it as necessary”;

   - Betsy’s conviction that reading skills were spiral-like, levels that built on levels, that children needed to learn these skills in a preestablished order, and that direct instruction “takes care of that”;

   - Eleanor’s belief that “reading was listening” and that other skills were important, but secondary to reading;

   - Frances’s stress on knowing words, sounds, and letters and on games and materials as ways to teach children to read.

   This finding seems to support Clark and Peterson’s (1986) conclusion that “teachers... hold implicit theories about their work...” It is also consistent with Nespor’s (1987) conclusion that “teachers’ beliefs play a major role in defining teaching tasks and organizing the knowledge and information relevant to those tasks” (p. 324).

2. During the study, 2 of the 4 teachers developed a new belief so strongly felt that it appeared to cause a shift in how the teachers organized their belief system. In the transformative process, the new belief was brought to the foreground and the teachers’ preexisting beliefs were subsequently revalued. At the beginning of the study, for example, Betsy believed that reading skills were spiral-like and that children needed to learn skills in a preestablished order. At that time, Betsy was teaching Distar and was an advocate of the Distar approach. She read extensively during the training year and, at the end of the first year, asked and received permission from her district to change schools and grade levels. In her new position—teaching kindergarten in a school that did not mandate Distar, Betsy experimented with her curriculum, trying to develop a curriculum that would get the children ready for reading instruction. She continued to read widely. By the spring of that year, and based on her observations of her children, Betsy found that her children had learned to read by reading and by writing. This discovery seemed to cause a transformation, a reshifting of priorities and a reshaping of previously held beliefs. Indeed, the new understanding/belief became the major force driving her curriculum, her instructional decision making, and her observations of children.

Preexisting beliefs, however, continued to influence Betsy’s decision-making process. For example, during the second year, after Betsy had begun to believe that children learn to read by reading and writing, she decided to have each child nightly take home four highly predictable books that they would read with their parents. However, because she continued to believe that children needed to encounter these books in sequence, by level of difficulty of text, she grouped several of her children’s books by reading levels—a skill she had learned in Reading Recovery—and selected books for each child based on her understanding of the child’s reading level. Preexisting beliefs, then, were not discarded but rather
were moved to the background and the new belief, that children learn to read by reading and writing, was now in the foreground.

Similarly, Eleanor's belief system seemed to be transformed. At the beginning of the study, Eleanor was in her 11th year of teaching. That year, and for the previous 9 years, she had been teaching Chapter 1. In our initial interviews with Eleanor, she explained that, from her perspective, "reading is listening"; correspondingly, she spent the first half of each instructional session on listening skills. In one such activity, she would ask a series of questions, for example, "Do carpenters build?" "Do ladybugs crawl?" "Do numbers whistle?" to which the children responded “Yes” or “No.” Alternately, she would say three numbers in sequence and ask the children to say the numbers back to her. For the second half of each period, children worked on particular skills, for example, phonics, sight words, dot-to-dot, and coloring worksheets.

During the first year of the study, Eleanor made a number of curricular changes. When she first made these changes, however, she did not revise former practices; rather introduced the new practices almost parallel to the old. This meant that, at some moments on some days, instruction in Eleanor's classroom was nearly identical to the practices observed in the beginning of the year. At other moments, however, instruction looked radically different. Some instruction, for example, seemed to be materials centered. Eleanor addressed the students as a group, asking them questions, assigning worksheets, and referring to a teacher's manual to determine the right answers. The interaction pattern was consistently "teacher initiates/student responds." During other times, however, instruction focused on the individual child, and Eleanor responded based on her observations of that child. At these times, the tone of the interaction was conversational, with teacher and student working together to address the particular student's needs.

Over the course of the year, the child-focused moments occurred more frequently, and the materials-centered events occurred less often. This pattern continued into and throughout the second year. At the beginning of the second year, for example, Eleanor began the class period by reading a book to the children and talking with them about it. This was followed by group reading of a language-experience story the children had written recently, and then the children continued the writing they had been doing for another class book. In contrast to the first year, during the second year, Eleanor was asking the children to do different things, in different ways, in a different context. As Eleanor remarked, "If you notice, rather than me sitting in the traditional (way), sitting in front and teaching, I'm the one that's saying, 'What do you think?' "Does that sound right?"

The notes the researcher made in her description of the day capture the change that she noticed:

What is interesting is that the feel of this class is not one of control, but of sharing. Students participate verbally and move more freely than in times past. This is shown by them at times communicating to one another, by Eleanor letting them communicate to one another and to her without being called on. Before, students were to be on task and blankly responded to ‘the question' and only ‘the question’. This is difficult to describe; it is just a sense of looseness that was not here before. Eleanor is also looser, smiling all the time, enjoying what she is doing, enjoying the responses that students make to one another or to her. . . . The students have been enthusiastically on task during this entire session, it just seems that the parameters of what is acceptable behavior are greater.

Comments on field notes, Eleanor's classroom,
First Observation, Year 2

In talking about these changes with the researcher, Eleanor commented, "Isn't this better than those worksheets! . . . I'm enjoying it!" Eleanor noted that she had been set in her ways before Reading
Recovery and that, through Reading Recovery, she began to "see what the kids could do." Eleanor also reported that Reading Recovery had given her confidence. Because of Reading Recovery, she had begun to feel, for the first time, that she finally knew what she was doing for kids and could be really helpful to them. Indeed, Eleanor felt that this renewed confidence was the source of the changes she had made and was continuing to make. Talking about what she had learned from Reading Recovery, a whole language workshop she had taken over the summer, and a whole language classroom she had visited, Eleanor noted:

Reading Recovery has given me a confidence, a different view of reading than I had before . . . I think whole language gives you the ability to work with the group as individuals rather than just treat them all as a group . . . . Reading Recovery gives you such an insight into these low children . . . it is not depressing to work with them and I feel like I can do this to other children, by using, not just Reading Recovery, but everything . . .

I feel like, "Hey, you guys can do this." Whereas I did not feel this way [before].

Eleanor, final interview, Year 2

Like Betsy, however, Eleanor did not abandon previously held beliefs. What changed was the weight or force of those beliefs relative to curriculum. In the beginning of the study, half of each instructional period had been devoted to listening exercises; by the end of the second year, listening was a small, almost unnoticeable, part of Eleanor's reading program. As Eleanor remarked, "I changed . . . I still think listening is important, but I think differently about it. I've realized that these children are capable of a lot more thinking than I thought before. Their thinking changed my thinking."

The effect of a transformative belief seems consistent with the basic premise set forth by Roehler, Duffy, Herrmann, Conley, and Johnson (1988) that "the personal knowledge which most influences teachers' instructional practice may not be teachers' beliefs or implicit theories but, rather, how they organize instructional knowledge" (p. 159). It also lends support to Clandinin's (1986) statement that "practices are coherent as a whole and, consequently, resistant to changes which do not allow the whole to remain coherent . . . change in practice can and does occur . . . but the changes in a teacher's practices are such that the coherence of the whole [is] maintained" (p. 162).

3. Changes began as experiments. Over the study, all 4 teachers chose to try out language, practices, and ideas, some of which they reported as being from Reading Recovery. If teachers concluded, based on their experiments, that the language, practice, or idea "worked," they continued to use it. If, on the other hand, they decided what they had tried did not "work," teachers abandoned the innovation. To determine whether something worked, teachers used their personal beliefs about reading, teaching and learning. Sometimes the power of these beliefs was modified over the course of the 2 years (e.g., Betsy's ideas about sequencing, Eleanor's ideas about listening); other times, teachers' beliefs at the end of the study were nearly identical to their beliefs at the beginning of the study. For example, during the first year of the study, Frances, a second-year Chapter 1 teacher, began to ask children, "Does this make sense?" to encourage them to use various strategies for decoding text and to introduce texts and then teach skills, rather than teaching the skill independent of text. However, by the end of Year 2, Frances decided that such techniques were not helpful to Chapter 1 students because they did not help the students learn the skills she felt they needed. She concluded that Chapter 1 students had "special needs," and reported that she intended to return to her pre-Reading Recovery practices the following fall. If we consider beliefs to be similar to theories, then this pattern seems to be consistent with Anning's (1986) finding that:

[T]eacher theory is inherent in their practice and it is through their practice that it is constantly reformulated and tested . . . . Teachers generate theory through cumulative
experiences and reflection on teaching and learning. In evaluating each new teaching and learning event, the principles embedded in teachers' theories are further confirmed, refined or modified. This cyclical process of reflection-in-action, a "continual interweaving of thinking and doing," was identified by Schon (1983) as the hallmark of the theory of practitioners, the kind of knowing "inherent in intelligent action." (pp. 143-144)

4. The new language and practices teachers tried out, and that they reported were from Reading Recovery, were quite similar to each other. All 4 teachers, for example, began to ask students, "Does that make sense?" and to use a technique they called "hearing sounds in words" to help students with spelling. However, while many of the ideas they inferred from Reading Recovery were similar, some of them were not. Betsy, for example, felt that what mattered in Reading Recovery was the integration of cue systems. "Children have to have cues, have visual ... structure. Visual is looking at the word, structural is, does it sound right? Meaning, looking at the picture. We need to pull all that together." Annabelle and Eleanor reported, however, that Reading Recovery was anti-phonics. Annabelle explained, [They teach us to] lay off the phonics basically. Because a lot of kids can't do phonics. Eleanor, when asked about her beliefs about phonics, replied, "[In Reading Recovery] you are not supposed to say that ... Reading Recovery does not believe in phonics." Frances had a third idea about Reading Recovery and phonics. She felt that what mattered in Reading Recovery was that phonics be taught in context rather than as a separate skill. She saw her teaching practices as consistent with Reading Recovery. At the beginning of the second year, for example, she explained that in the first year, because of Reading Recovery, she had "started using books more, the big books more, the language experience charts where they told a story. Then we went back, and we talked about different words and we got into phonics a bit and vocabulary." She intended to do more of that the second year: "Starting with a whole like a story they have written, or, um, literature, different types of books, and breaking it down into different types of ... skills."

5. Because teachers had different preexisting beliefs (and, for two of the teachers, reorganized belief systems) about reading, teaching, and learning, and had different "ideas about" Reading Recovery, what teachers took away from their Reading Recovery training year, relative to their regular classroom, differed considerably across teachers. That is, despite the fact that all 4 teachers were in the same university classroom with the same instructor and learning the same intervention process, the process of meaning construction was so individualized that, indeed, teachers did not have the "same" experience. The learning process of these four teachers, therefore, was consistent with what is known about learning more generally; that learning is context sensitive. Bloome and Bailey (1992), for example, in arguing for the importance of understanding the particular, note that teaching is "relatively context-dependent, tied to purposes and knowledge of the teachers themselves, and to the locally meaningful time and place of the particular teacher's appearance and response." Our finding is consistent with this position, supports the idea that learning is similarly context-dependent, and suggests that understanding the particular is as important to understanding the learning process as it is to understanding the teaching process.

6. What teachers believed and practiced by the end of Year 2, was affected not only by their preexisting beliefs, the organization of their belief systems, and their differing meanings for Reading Recovery, but also by a number of other factors including, but not limited to, (a) support and constraints they experienced personally and professionally, and (b) stances that they took as teachers and as learners. Some teachers felt free to experiment with new ideas in their classrooms and even to change classrooms, whereas others did not. Some teachers began to ask new questions based on observations of their students and actively sought answers to those questions by reading professional materials, attending conferences, and visiting classrooms of other teachers; others did not. Some teachers began to use the researcher as a sounding board and as a way to think about new ideas. Indeed, one teacher called the researcher and asked her to come back and push the teacher's thinking by asking more questions about writing; others did not. This finding is consistent with the work of several researchers and theorists, all
of whom have suggested that teachers teach the way they do because of their personal and professional histories, as well as the characteristics of the context in which they are working (Bloome & Bailey, 1992; Johnston & Weiss, 1990; Mattingly, 1987; Zeichner, 1986).

7. While there were four consistent surface-structure changes, the impact of these changes varied across the four classrooms studied. The 4 changes included (a) teachers' attempt to help the children become independent and strategic readers; (b) an increased use of trade books in the classroom; (c) the emphasis, when children were reading aloud or silently, on whether the passage made sense; and (d) the teachers' believing that they had become better observers of children. They attributed all 4 of these changes directly to Reading Recovery training.

It appeared that the first 3 changes occurred consistently across all 4 teachers because teachers found themselves agreeing with the idea that children should be able to read independently, that reading should be pleasurable, and that it should be meaningful. Reading Recovery provided a means to that end, for example: ask the children, "Does this make sense?"; preview the book with the child before reading; teach for strategies within connected text; choose books that are interesting and pleasurable; focus teacher response on meaning-making and, through response, help the children become independent and strategic readers.

However, what varied was the power of these beliefs relative to curriculum and instruction. At the beginning of the study, all 4 classrooms were driven by other beliefs alluded to earlier in this report, for example, Eleanor's belief that reading was listening. Over the course of the 2 years, in Betsy and Eleanor's classrooms, the 3 commonly held surface-structure changes (try to help the children become strategic, use trade books, emphasize that the passage should make sense) came to play a major role. In Annabelle and Frances's classrooms, in contrast, these ideas had a less powerful impact. In Annabelle's classroom, her concerns with going along and covering material continued as major forces. In Frances's classroom, her concern for skills remained primary. In their classrooms, the new behaviors, consequently, were added to existing practices but did not become central features of the instructional landscape. As Frances described it, "I have a cookbook philosophy."

There were also idiosyncratic differences within the fourth similarity—the teachers' report that they were now better observers of children. Betsy and Eleanor reported that they were better able to understand individual children. Eleanor saw Reading Recovery as similar to Whole Language and explained that Whole Language, like Reading Recovery, "gives you the ability to work with the group as individuals rather than just treat them all as a group." She added that this perspective enabled her to understand what individual children could do. These observations played a critical role in the development of transformative beliefs. Eleanor's renewed confidence in herself (which she attributed to her success with children within Reading Recovery) provided the impetus for curricular changes, changes she grounded in her observations of individual children. Betsy's observations of individual children led to her new belief that children learned to read by reading and by writing. Betsy and Eleanor, then, felt they had become better observers of individual children and, subsequently, their new knowledge of children led to the transformation of their beliefs and practices.

Frances also believed that she had become better at observing children. Frances, however, focused on observing groups of children relative to the "scope and sequence of the basal program of the classroom." In Year 2, for example, she talked about one group as needing more work on listening and about all groups as needing more phonics. For Frances, these observations led to a decision not to change her classroom practices. She decided that Reading Recovery and whole language, which she saw as synonymous, did not work for her Chapter 1 students, for "low achievers," and that she would return to pre-training year practices the next year.
Annabelle also believed that she had become a better observer of children. However, she also acknowledged that she had not yet put her beliefs into practice, that how she talked and thought about teaching were not consistent with how she taught. As she commented in the final interview, "You know, I tend to not teach the way I should be doing, but to play it by ear... I tend to be really good book wise but I tend to be really reluctant to put all those ideas into practice." It was, therefore, not possible to see how Annabelle's reportedly improved abilities to observe informed her instructional practices.

Conclusions and Implications

These findings have led us to tentatively conclude, first, that these 4 teachers' beliefs and practices were embedded within and tied to broader contexts: personal (themselves as professionals and learners), social (support and/or constraints), and historical (previous ideas about what reading is as well as about how to teach and learn reading). In terms of teacher education, it would seem that a broader and deeper understanding of these contexts would inform the professional development process. Frequently, professors tend to begin with what they know and with what they believe their students/teachers need to know. It would be helpful to examine what would happen if the backgrounds, lives, and experiences of preservice and inservice teachers were brought into the college-level classroom, rather than kept separate from it. Indeed, given that we know that teachers rely on previous experiences to inform current practices, it seems imperative that critical reflection on their experiences and an exploration of the contexts within which they live and teach be a part of, rather than separate from, the process of teacher education.

Second, for these 4 teachers, experimentation occurred within these diverse contexts; that is, the beginnings of what might be long-term change looked like evolution, not revolution. In terms of inservice teacher education, this might suggest that change agendas need to have time lines that are years rather than hours, weeks, or semesters long. Indeed, it might be possible to think of teacher change not as a fixed entity, with a fixed time line, but rather as a lifelong process of professional growth. In terms of research, this might suggest that studies examining teacher change be longitudinal. It also suggests that studies examining teacher change be longitudinal. It also suggests that researchers need to accept the fact that no matter what the length of the study, they have only a limited access to teachers' thought processes. Indeed, our sense from this study was that 2 years was not nearly enough time to really understand the change process. And while we would have liked to follow Annabelle, Betsy, Frances, and Eleanor for another 2 years, we feel that we still would not have known all that we needed to know. It also seems important to examine whether, and how, long-standing beliefs are or can be altered. Over the 2-year period, 2 of the 4 teachers developed new beliefs that transformed their belief systems, and, in turn, their teaching practices. We need to understand more about the genesis and impact of transformative beliefs.

Third, change or consistency at the individual level was idiosyncratic rather than generalizable. These 4 teachers attributed changes and consistencies to Reading Recovery as well as to other factors, including the reading they had done, conferences they had attended, classes they had taken, their confidence in themselves, what they learned from observing their children, and/or the influence of the researcher as a person who asked questions. Some teachers, by some standards, might have been considered "better" teachers at the end of the study; others may not have been considered better. This conclusion has implications for preservice and inservice education, generally, as it suggests that supporting teacher change is more complex than the linear model that now dominates inservice education (e.g., one-shot inservice sessions). It also has implications relative to the efforts being made, in various districts and states, to have all first-grade teachers trained in Reading Recovery. This effort seems to be grounded in a belief that Reading Recovery training somehow makes teachers better classroom teachers. This study does not support this argument, nor does Marie Clay, the developer of the Reading Recovery program. Reading Recovery, she notes, does not prepare first-grade teachers to teach reading in the regular classroom; instead it offers teachers "rationales" (personal communication, 1991), it prepares teachers to use a particular set of "detailed, meticulous and special reading recovery
procedures" (Clay, 1985) one-on-one, daily, with the lowest achieving first-grade children. Reading Recovery training, she has noted and this study suggests, is not a way to make first-grade teachers "better."

**Concerns and Limitations**

We are aware that 2 years may not be a long enough time for changes to occur or be evident, and that findings from research on 4 teachers all trained in one site at one time may not be representative of other teachers trained at different sites or at different times. Neither are they representative of the findings that might have emerged from teachers exposed to other sources of new information. We have, nevertheless, learned a great deal from this study and have shared our conclusions above. In addition to these findings, and because of our involvement with these teachers over a 2-year period, we have come to understand a number of things that were not an official part of the study. Two of these things have been a source of particular concern.

First, we were both surprised and concerned about what teachers considered to be "new." One teacher, for example, felt that talking to children about the book was never, another felt that allowing the children to look at and think about pictures was never, still another reported that it was new to think of reading as a process that involved meaning and using books as a part of reading instruction. We would not have predicted that this information would have been considered "new" to teachers simply because it did not seem so to us, as university educators. That raises serious questions about the role of the university relative to teacher education. All 4 teachers had taken either undergraduate or graduate courses in reading at some point in the preceding 10 years. Indeed, 2 of the teachers had recent master's degrees in reading. That there are discrepancies between what we and the teachers considered "new" could mean that we, at the university level, are not successfully communicating what we know and/or that what we know about readers and reading may not be perceived as useful to practicing teachers. At the very least, it suggests that each of us needs to take hard looks at what we do in the name of teacher education.

Second, we are concerned about the lack of support that teachers perceive as being available to them relative to their professional growth. Woven into many of our conversations with teachers were comments about how much they appreciate the opportunity to have someone to talk to and about how few opportunities teachers have to get any real help. Across both years, but particularly in the second, teachers talked repeatedly of needing to know more, to learn more, and about not having support to do so. Interestingly enough, neither traditional university classes nor school-based inservice sessions were seen as ways to get the kind of help they needed.

As these concerns perhaps suggest, our experiences with this study have raised new questions—questions about teaching and learning, about teaching teachers and teaching children, about the kind of multifaceted change agendas that will be needed if we want schools—whether primary, secondary, or tertiary—to meet the learning and literacy needs of all. We hope that this report helps raise still other questions, encourages further investigation, and informs change agendas.
References


APPENDIX A

Initial Interview

1. Organization of day, of week, of year.
   How are days organized; why are they organized that way; how long have they been organized that way; what are the influences on the organization.

2. Reading/writing/literature
   How reading, writing, and literature fit into the organization; why they fit in that way; how reading and writing relate to each other; how each is organized and why.

3. What a typical reading/literacy experience might look like (and why it is set up that way).

4. How the teacher generally responds to children within that experience and why.

5. How the teacher responds (specifically) within that/those experience(s) (e.g., When a child comes to a word that s/he does not know, what does the teacher say/do? When a child is reading aloud and miscues, what does the teacher do? When the child is writing and misspells a word, what does the teacher do?)

6. How the teacher perceives the typical student/the range of students relative to reading.

7. What problems the teacher associates with difficulties related to reading and how she addresses those problems (i.e., what does she see as appropriate remediation?).

8. How the teacher assesses her students. How she knows they are doing well, having trouble, making progress, not making progress. How does she respond if the child is having trouble, not making progress?

9. The teacher's background--training, degrees, teaching experience.

10. The teacher's reason for choosing to become a Reading Recovery teacher. Her expectations (generally) and (specifically)--how she thinks this will affect her as teacher.
APPENDIX B

Final Interview

I. Let's talk about this year:
   1. What has this year been like for you?
   2. How has it been different from other years?
      a. organization - Do you do school differently? If so, how?
      b. reading/writing instruction
      c. students
   3. Have you changed as a teacher/person? If so, how?
      a. Do you see yourself any differently this year?
   4. (2-3) How do you account for this change?
      a. What made the changes occur?
      b. How did the changes occur?
   5. What do you know now that you didn't know before?
   6. How would you describe yourself now as a student as compared to being a student
      before?

II. Reading Recovery:
   1. What has Reading Recovery been like?
   2. Has this experience been beneficial to you? Not so beneficial? What has been the most
      beneficial? Least beneficial?
      a. What are some of the things you learned about in your training that you might not
         have known before? Was there anything special about the training?
   3. Let's look at the other side of the question, what are the things that you would change
      about that experience?
   4. Have you changed as a result of Reading Recovery? Stayed the same? In what way?
   5. If you were going to describe Reading Recovery to another teacher what would you tell
      them?
   6. How would you describe your relationship with other teachers? administrators? parents?
      co-teacher? teacher leader?
   7. How do other teachers react to your Reading Recovery program?
   8. What things have been easier for you? Harder?
   9. What have been some of the constraints? The support?

III. Students:
   1. When you are observing kids what do you think is important? What do you look for?
      Is that the same as last year?
   2. When a child comes to a word he doesn't know, what do you do? (Determine how long
      the teacher waits)
   3. What do you do if the child misreads a word?
   4. If you were going to go into a classroom and find the kids that were at-risk, what would
      you do?
      a. Are there some kinds of kids you anticipate being at-risk? Why?
      b. If you've identified a child potentially at risk, how do you deal with this?
   5. What cues do you look for to identify a child who will potentially have difficulty reading?
      writing?
Appendix B (continued)

IV. Teaching:
1. What really matters to you about teaching, etc.?
2. What do you think your strengths in teaching are?
   a. Were these strengths present in September?
3. What do you think you can improve?
   a. Did you always consider this as an area for improvement?
4. What is critical for reading? (e.g., make task easy; controlled challenge)
5. Do you think that there are any kids that "can't" learn to read?
6. How do you teach writing?
7. How do you pick books?
8. What's the distinction between teaching and learning?

V. Acquisition of reading:
1. What are the essential skills a child should have coming into first grade?
2. What do you consider to be essential elements to reading instruction? (I recall that you said . . . was important.)
3. Have you noticed any changes in the way you instruct students in reading outside of reading recovery?
4. What role does writing play in initial reading instruction?
5. Does the parent have a role in the reading process?

VI. Assessment
1. What role does assessment play in the instructional process?
2. What types of things are important to assess in beginning readers?
3. What recommendations would you make to a classroom teaching about assessing student skills?
4. Has your view of assessment changed in the last year? If so, how?

VII. Future:
1. How do you think next year will be for you?
   a. Do you see it as being much different?
2. What do you see as your goals for the next few years?

VIII. Conclusion:
1. What are the teacher's questions and concerns?
2. Please clarify the things that we don't know or understand.