

## Learning to Teach Struggling (and Non-Struggling) Elementary School Readers: An Analysis of Preservice Teachers' Knowledges

By: Ann M. Duffy and Terry S. Atkinson

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### **Abstract:**

The purpose of this research was to describe elementary school preservice teachers' beliefs, understandings, and instruction of struggling and non-struggling readers as they evolved over time in two university reading education courses with a field component. Using a qualitative content analysis, we analyzed the assignments of 22 preservice teachers across one year of their teacher education program. We found that, throughout the year, preservice teachers improved in their abilities to integrate their personal, practical, and professional knowledges to inform their reading instruction. Their misunderstandings surrounding reading instruction decreased while their abilities to examine reading instruction critically and estimations of their preparedness to teach struggling readers increased. Preservice teachers' views about the value of assessing students' reading proficiency became increasingly more positive as did perceptions about the importance of tutoring struggling readers. Finally, implications are made to suggest how university reading education courses may support the learning and development of future preservice teachers.

### **Article:**

Anders, Hoffman, and Duffy (2000) began their chapter on "teaching teachers to teach reading" in the Handbook of Reading Research as follows:

How should teachers be taught to teach reading? This question has received little attention from the reading research community. Reading researchers have attended to the reading process, drawing inferences and conducting studies to test their theories. Relatively few researchers have asked questions about the processes that teachers go through as they learn and continue to learn to teach reading. We sense, however, that reading researchers are beginning to turn their attention to this crucial question (p. 719).

In our research, we investigated "the processes that teachers go through as they learn and continue to learn to teach reading" through an analysis of elementary school preservice teachers' beliefs, understandings, and instruction of struggling and non-struggling readers as they evolved over time in two university reading education courses with field components.

Despite the need for elementary school classroom teachers to know how to teach struggling and non-struggling readers effectively (e.g., Walmsley & Allington, 1995), many elementary school teachers view teaching students with a wide range of reading levels as one of the greatest

challenges that they face (Baumann, Hoffman, Duffy-Hester, & Moon, 2000). The need for preservice teacher education programs to prepare future educators to teach students of varying reading achievement levels has been discussed in the literature (e.g., Allington, 1997; Allington & McGill-Franzen, 1989; O' Sullivan, Ysseldyke, Christenson, & Thurlow, 1990); however, the extant research on how teacher education programs can be designed to accomplish this goal is limited (e.g., Broaddus & Bloodgood, 1997; Duffy, 1997a; Fogg & Morris, 1997; Hopkins, Nierstheimer, Schmitt, & Dillon, 1996; Mallette, Kile, Smith, McKinney, & Readence, 2000; Worthy & Prater, 1998; Worthy, Prater, Patterson, Moorman, & Turner, 1997; Roskos & Walker, 1993, 1994; Worthy & Prater, 1998).

Research suggests that teachers tend to teach the way that they were taught (Clark, 1988; Kagan, 1992) unless their university coursework makes a direct attempt to address their preconceptions (e.g., Fosnot, 1989; Wolf, Carey, & Mieras, 1996). Hiebert and Stigler (2000), in their TIMMS research, documented the resiliency of traditional teaching methodologies and concluded that teachers' practices are not necessarily impacted by their familiarity with research on best practices. Simply familiarizing educators with current ideas on researched-based practices may not be sufficient in terms of supporting educators in reforming their instruction. Gerald Duffy (1998) concluded that "the key to developing inspired teachers lies with instilling belief in themselves and in their ability to decide how best to promote the visions they have for their students" (p. 780). Accordingly, the instruction provided to the preservice teachers in this research attempted to address and build on preservice teachers' personal, practical, and professional knowledge in literacy education (Vacca, Vacca, & Gove, 1995) as a way to help them become "reflective practitioners" (Schon, 1983) and "thoughtfully adaptive" (e.g., Duffy, 1998) educators who know how to teach struggling and non-struggling readers effectively.

## **METHODS**

This research followed 22 preservice teachers through one year of their teacher education program. This yearlong investigation was conducted in two reading education courses designed for undergraduate elementary education preservice teachers. The first course focused on research, theory, and practice related to implementing elementary classroom reading instruction, which included choosing and using texts in the reading program, comprehension and vocabulary instruction, word identification and fluency instruction, and designing a balanced literacy framework for instruction. This course included a one-week internship in an elementary school classroom in which these preservice teachers were required to observe and assist in instruction. The second course focused on the assessment and instruction of diverse elementary school students, including struggling readers. This course included a four-week internship in which the preservice students were required to tutor a student who was considered to be struggling in reading and to implement a minimum of two reading lessons to a small group or a whole class of students.

Both courses supported the preservice teachers in using their beliefs about literacy instruction, research and theory, and practical knowledge when designing reading programs and teaching reading. Drawing on the framework established by Vacca, Vacca, and Gove (1995), instruction was intended to model for students how personal, practical, and professional knowledges could be used to inform their reading instruction. For example, when we were discussing word identification, we read and discussed research and theory related to word identification

(professional knowledge); viewed videotaped examples of effective word identification instruction; discussed effective word identification instruction that the preservice teacher observed in their field placements; participated in simulations of word identification lessons, and read about examples of effective word identification instruction (practical knowledge); and discussed our own experiences as children in school and at home with word identification instruction, shared our reactions to newspaper and magazine articles related to debates surrounding phonics instruction, and articulated our beliefs and goals related to word identification instruction (personal knowledge). In a learning log assignment related to word identification, students were asked to provide personal, practical, and professional bases for the word identification instruction that they intended to provide in their future instruction. Specifically, students were expected to justify their intended or actual instruction of elementary students in their coursework assignments, as applicable, through the use of their own beliefs, values, feelings, reactions, or experiences from their own elementary school experiences (personal knowledge); their observations of instruction, teaching experiences, and instruction read about, discussed, or modeled in their university coursework (practical knowledge); and their understandings and interpretations of research and theory that they read or discussed in conjunction with their university coursework (professional knowledge).

Twenty-four students were enrolled in these courses, with 23 students choosing to participate in this research and 22 students completing the yearlong course sequence and thus included in data analysis. Of these 22 students, 7 students were African American and 15 were European American. One of the twenty-two students was male; however, to protect his anonymity, we assigned him a female pseudonym. By agreeing to participate in the research, the students permitted the researchers to use the coursework assignments that they submitted in formal data analysis. Students who participated in the research submitted the same coursework assignments that non-participating students submitted. To reduce the risk of bias, formal data analysis did not occur until after students' grades were submitted. All student names used in this research are pseudonyms.

The first author was the instructor of these reading education courses and supervised or communicated with these students in their field-based experiences. The first and second authors worked in conjunction with one another in formal data analysis and interpretation.

During the first course, data sources include students' initial essays that they wrote at the beginning of the course that described their thoughts on how reading should be taught; students' literacy autobiographies; three learning logs on the topics of reading materials, approaches, and development; word identification and fluency, and comprehension and vocabulary; an analysis of the reading program implemented in their internship site; and a hypothetical letter to the families of the future students who they might teach detailing the classroom reading program that they planned to implement. During the second course, data sources included a reflection on teaching struggling readers written by students at the beginning of the second reading education course; email messages from students to the first author when they were participating in their field-based experiences; and a final essay on teaching struggling readers written by students at the end of their reading education coursework. Additional assignments were included in the courses (i.e., two individual lesson plans, one group lesson plan, and attendance and participation in the first course; and assessment materials, article discussion facilitation, tutoring plans and reflections,

group lesson plans and reflections, a case report, attendance and participation, and a final exam during the second course) but they did not lend themselves to formal interpretation and analysis; as such, they were not analyzed as data sources in this research. Some of these assignments were joint assignments between the preservice teachers' reading education course and their language education course.

We analyzed the data through a qualitative content analysis (Patton, 1990). In Phase I, informal analysis, the first author reflected upon and modified her instruction as she read, commented on, discussed, and graded students' written assignments. In Phase II, coding, we read all data sources and wrote analytical and methodological memos on the data sources independently. In Phase III, initial category creation, we used our memos to discover the potential categories that emerged from the data and color-coded all data sources according to emerging categories. In Phase IV, category confirmation, we established triangulation through the use of a matrix that juxtaposed data sources and students to insure that evidence existed for each of the potential categories. Positive and negative cases within each of the categories were documented. We reworded or discarded categories as necessary based on the results of the confirmation process. In Phase V, conferencing, we discussed and resolved discrepancies regarding the evidence for categories across data sources and students. After conferencing, seven categories were established.

## **RESULTS AND DISCUSSION**

Seven categories emerged from our data. The first five categories detail the preservice teachers' learning processes and describe the nature of their beliefs, understandings, and instruction surrounding struggling and non-struggling readers. The final two categories detail the preservice teachers' experiences and detail what the preservice teachers valued in their coursework and in their clinical experiences. Specifically, during their coursework,

1. Preservice teachers improved in their abilities to integrate their personal, practical, and professional knowledges to inform their actual or intended reading instruction.
2. Preservice teachers decreased in their misunderstandings surrounding reading instruction principles, practices, and terminology.
3. Preservice teachers' abilities to examine reading instruction critically in relation to best practices, research, and theory increased.
4. Preservice teachers' estimations of their preparedness to teaching struggling readers increased.
5. Preservice teachers valued the use of diagnostic assessment to inform their instruction of struggling readers.
6. Preservice teachers requested assistance in the use of assessment and/or instructional strategies prior to and during their initial instruction of struggling and non-struggling readers.
7. Preservice teachers valued their experiences tutoring struggling readers.

In this section, we will discuss each of these categories/processes in relation to our data and extant research and theory.

Preservice teachers improved in their abilities to integrate their personal, practical, and professional knowledges to inform their actual or intended reading instruction. There was a clear

trend from the beginning of the first course to the end of the second course in terms of students' abilities to use their personal, practical, and professional knowledges in a more integrated fashion to inform their reading instruction. Specifically, 5% (1/22) of students integrated their personal, practical, and professional knowledges to inform their instruction at the beginning of the first course, 11 of 22 students (50%) did so during and at the conclusion of the first course, 16 of 22 students (73%) achieved this goal at the beginning of the second course, and 18 of 22 students (82%) utilized integrated knowledges at the end of the second course to inform their instruction.

In the beginning of their coursework, 13 of 22 students (59%) relied on their personal knowledge exclusively to inform their intended reading instruction, with one student using personal, practical, and professional knowledge to inform her future reading instruction and the remainder of students (36% or 8/22) using some combination of these knowledges to inform their future reading instruction. This reliance on personal knowledge was not unexpected given that students had no previous formal coursework in reading methods and the rationale for the initial course assignment that the first author provided in the syllabus:

As we will be discussing throughout the course, I think that good teachers of reading rely on their personal beliefs and experiences, theoretical knowledge, and practical knowledge when designing and implementing classroom-reading programs that support all children. It is important for you to discover your own biases about teaching reading by reflecting on your own experiences. This assignment is a way for you to begin thinking about why you want to teach reading in particular ways based on your personal experiences. Please revisit this essay in your learning logs and reflections throughout this course.

For the remainder of assignments in the courses, as applicable, students were asked to describe how they could use their personal, practical, and professional knowledges to inform their instruction.

As an example of students' use of their personal knowledges to inform their future reading instruction, Priscilla explained in her initial essay at the beginning of the first course:

I was taught how to read by learning all of the different sounds each letter of the alphabet makes. We also learned the sounds of some two-letter combinations. We learned words that had these sounds in them. In other words, we would sound out each part or syllable of the word, and then put them all together to read the entire word. Along with learning to read by using this technique, we were also taught some common words... to recognize when reading and to help read long words that contained some of these common words. This method worked pretty well with me. I would probably base my program on similar techniques.

Similarly, Natasha related, "I was taught using phonics and by using the technique of sounding out words as best I could. So, this will more than likely be some of the techniques that I will be using in my classroom as beginning steps in my students' learning how to read."

As an example of how preservice teachers integrated knowledges, Linda articulated in the "parent letter" assignment how she utilized her personal, practical and professional knowledges to inform her instruction:

After examining many different reading programs and the effects they have had on children, I have realized that there is not a single method that will meet the needs of every student. With this idea in mind I have chosen a balanced program that allows the use of a variety of approaches. My goal in this program is to instill in students a

joy for reading while also giving them tools to aid them while they read through explicit instruction. Research shows that while some improvement is seen in out of classroom tutoring, the improvement could be greatly increased if classroom teachers would be willing to share responsibility for teaching students how to read. I do believe that it is my job to help children reach their full potential, and will do everything in my power to encourage growth in all of my students. In the following pages I will explain more about using the balanced approach, the structure of my reading program, and how you [parents] can help this program be more effective.

For Ilsa, this knowledge integration occurred at the end of her coursework in her post-field essay:

During this semester's classes and four-week field experience, everything that I had learned in regard to teaching reading has finally come together. I am finally able to make the connections between everything I have learned between classes and between theoretical and real life.... I will provide many books of all levels for the children to read. I believe that it is very important for children to develop their confidence and learn to just enjoy reading through easy or independent level books. I will also have a set independent reading time for my students. I believe this is also very important for struggling readers in order that they see the value of reading through intrinsic motivation. The school that I was in this semester used the Accelerated Reader program in order to motivate the students to read. I did not like this program because the motivation was purely extrinsic. The students read as many books as they could as fast as they could so they could earn points. I believe that these students missed the whole enjoyment and point of reading. Finally, I believe that struggling readers can be taught to read on grade level taking one step at a time. I believe that we need to assess what the student knows and then work from there....

Preservice teachers' abilities to articulate how they may utilize integrated knowledges to inform their reading instruction may not necessarily translate into their abilities to teach reading. However, as Gerry Duffy (1997b) asserted and we conclude, "teachers who do their own thinking will provide qualitatively better instruction than teachers who passively follow models or materials" (p. 363). As Richardson (1996) speculated, "A clear articulation of the relationship between the development of formal and practical knowledge may help teacher education students understand what they are learning and why: that the purpose of preservice teacher education is not necessarily to teach students who to teach, but to help them learn ways of thinking, as well as concepts and actions that will help them learn how to teach and acquire useful and worthwhile practical knowledge" (p. 55). We view encouraging future teachers to engage in this way of thinking as a possible first step on the road to encouraging them to become "reflective practitioners" (Schon, 1983).

Preservice teachers decreased in their misunderstandings surrounding reading instruction principles, practices, and terminology. Throughout the first course, students articulated many misconceptions and misunderstandings related to reading instruction principles, practices, and terminology. Specifically, 18 of 22 students (82%) articulated misunderstandings at the beginning of the first course, 20/22 (91%) of students expressed misunderstandings during the first course, and 19 of 22 students (86%) expressed these misunderstandings at the end of the first course. Some of these misunderstandings revealed students' unsuccessful attempts to include research to inform their instruction. For example, Gail related, "I know that strict ability grouping is not the best solution, therefore I will have times when the class... [meets] as a whole and times when they are in flexible groups. The reason being that research shows that it is best to

have 'endogenous, exogenous and dialectical constructivism.'" Other comments revealed students' misunderstandings of terminology that was utilized in class discussions and in their readings. For example, Ashley stated that, "What many call Whole Language is actually a part of phonics instruction." Other misunderstandings arose during students' field experiences. For example, Natasha related:

[The] texts [read in the reading methods course] appear to mostly look down on ability grouping; for instance, Cunningham and Allington point out that research tells us that grouping can produce harm instead of help for children (1994). According to [internship teacher], however, [name of school] has made their ability grouping program work. He also explained to me that there is literature and research that supports ability grouping; during my [university] experience, I have been constantly bombarded with the idea that ability grouping leads nowhere... [Name of teacher] says that the reasoning behind grouping students is "self-esteem" and more opportunity for academic success. Low level readers do not have to feel less intelligent because they can not keep up and high level readers do not have to have their learning slowed or stifled. Also within this grouping program, low level readers do not have to feel incompetent within a class of readers who are more advanced than themselves; this is where self-esteem comes in. According to [name of teacher], self-esteem has increased with [name of school's] ability grouping program. I think that this is great... I felt this grouping was wonderful because it appeared to be effective. Furthermore it seems to make sense to group students according to their level of knowledge; I mean, aren't we as teachers to teach students in ways that comply with a student's individual level?

Other misunderstandings related to the preservice teachers' biases. For example, Gail related, "The school was of a low, very low, socioeconomic background. I know that this information is not supposed to matter to a teacher but believe me when I say that it really does. Half of the children were living in filth with no parents at home and no transportation. The other half were talking about drugs and sex... I felt that the reading program was basically composed of a basal reader and worksheets. I know that this is not the right way to teach all the time but she [teacher] said [that] with all the children [from those backgrounds] that there was not much else to do." Still other misunderstandings took the form of overgeneralizations and oversimplifications. For example, Olga explained, "By the time students get to the third grade, I believe that children should have already been taught with phonics, so this will not be a part of my program."

As these misunderstandings arose, the first author addressed them with students in class and in response to their written assignments. Consequently, students' misunderstandings decreased during the second reading education course, with 8 of 22 students (36%) articulating misunderstandings at the beginning of the second course and 4 of 22 students (18%) articulating misunderstandings at the end of the second course.

We concur with Mallette et al. (2000) who concluded that teacher educators need to "consider the idiosyncratic nature of the meanings preservice teachers construct" (p. 611). Indeed, as Anders, Duffy, and Hoffman expressed, "we worry... about whether our students are getting 'essentials' that might ease their beginning teaching" (p. 733). Had these misconceptions and misunderstandings not been addressed directly during the preservice teachers' coursework, we wonder how these misunderstandings might have affected their future instruction. Drawing on the work of Zeichner (1983), Alvermann (1990) conceptualized reading teacher preparation as focusing on "traditional-craft," "competency-based," or "inquiry-oriented" models. To address the misconceptions of preservice teachers, we ponder whether a blend of these models in teacher education programs may aid preservice teachers in developing the requisite knowledge, skills, and dispositions that they need to become proficient teachers of struggling and non-struggling readers.

Preservice teachers' abilities to examine reading instruction critically in relation to best practices, research, and theory increased. Students participated in a weeklong internship during their first reading education course and a four-week internship during their second reading education course. During the first course, half (11/22 or 50%) of the students expressed criticism of the reading instruction that they observed and in which they participated during the first course, despite the fact that aspects of the observed instruction contradicted the research, theory, and practices that were discussed in their university coursework. For example, Ann had no criticism of her first field placement despite the fact that this program utilized a "six minute" independent reading time and ability grouping; specifically, she related, "Mrs. [name of teacher] uses an excellent reading and writing program. I strongly believe in a balanced literacy program, and she definitely had one. Her program was very consistent in that she included the different reading and writing components each and every day. The kids seemed to really enjoy reading and writing." Similarly, Hannah, who observed in a classroom utilizing a prescriptive phonics program and ability grouping, exclaimed:

I came away from my field placement completely excited. I am so excited about teaching reading. My cooperating teacher was extremely gifted and managed the classroom beautifully to where every child was given the best possible environment to learn in. The children responded well to her and really participated in all activities... It was such a delight to spend time in a real "classroom that works."

During the second course, 16 of 22 students (73%) expressed concerns about the reading instruction that they observed in their internship settings. An example of how preservice teachers examined the reading instruction in their internship settings critically in relation to best practices, research, and theory can be found in the email message of Ariel, who expressed many concerns about her fourth-grade internship placement in the second semester of the course:

This reading program does nothing for the benefit of the struggling readers. And it hardly does anything great for the good readers, too... The first area that can be attacked is the most logical one. Why in the world would you assign your struggling readers to be instructed by paraprofessionals? And the advanced readers (the one who need the least guidance) with the experienced professionals? This is like the blind leading the blind. The struggling readers are already limited from the start, because they cannot receive the level of teaching that they so badly need. And this is an enormous flaw in the program. Another thing. There is too much time spent on worksheets. The kids are filling out these boring, senseless things all day, and learning nothing... They fail to teach skills or strategies... And what about independent reading time? The time where children can choose their own literature to read silently for 20 minutes a day? Well, how about the kids who spend that time sleeping? Drawing? Staring at the ceiling? And how about the ones who pretend they can read a chapter book, when in reality, they can't identify all the letters in the alphabet?... What can be done to help this reading program? I would start by attacking the three main foci of my argument. 1) Pair the struggling readers with the best teachers. 2) Get rid of the worksheets. 3) Enhance the independent reading time....

Irene described her experiences in her second-grade internship as going "against almost everything we were taught in our [university] class. All it is, is worksheet after worksheet. During this time [name of teacher] gives me four of her most struggling readers. Together we do her assigned worksheet. The poor things have a difficult time even reading the directions, let alone understanding what they are asked to do."

Although we see it as essential to help preservice teachers reflect critically on their own instructional practices and the practices of other educators, we also are concerned about what



may happen to these future teachers when they enter the teaching profession as beginning teachers in this age of "quick-fix" reading programs and instructional mandates, high-stakes testing, and political control. We see this tension resembling the difficulties that Duffy (1997b) posited in "teaching teachers to be entrepreneurial while simultaneously preparing them to 'talk the talk' with hiring personnel who often expect teachers to follow district mandates" (p. 363).

Preservice teachers' estimations of their preparedness to teaching struggling readers increased. Unlike the issue for preservice teachers in other research studies (e.g., Hopkins, Nierstheimer, Schmitt, & Dillon, 1996), the issue for the preservice teachers in this research was not whether they felt that they were responsible for teaching the struggling readers in their classrooms. Indeed, the vast majority of the students in this research (21/22 students or 95%) stated that they did believe it was either their sole responsibility as elementary school classroom teachers or their responsibility in conjunction with the families and other teachers of these students to teach struggling readers how to read. The issue for the students in our research study was that, despite having completed one course in reading education, 15/22 students (68%) of the students stated that they did not feel prepared to teach struggling readers at the beginning of their second reading education course. For example, Shanta stated, "Basically. I am pretty terrified about teaching students who have a problem with reading." Ilsa explained, "The idea of teaching struggling readers is really frightening to me. I don't yet have the confidence that I know that struggling readers need or that I can help them reach grade level." Haley stated, "One of the biggest challenges I believe I will face as a teacher is teaching struggling readers... I am worried that no matter what I try my students will not get it. I do not feel that I am prepared to teach so many students with varying reading abilities." Natasha related, "When it comes to the idea of teaching struggling readers, my feelings are uneasiness and fear... I, of course, feel unprepared to teach struggling readers."

Students' perceptions of preparedness increased markedly during their second course, with 18 out of 22 students (82%) stating that they felt prepared to teach struggling readers at the end of their coursework. For example, at the end of her coursework. Heidi stated, "After having the experience with the struggling reader, I feel that I could help any struggling reader and that I'm prepared to teach reading. I feel very confident." Ann explained, "Now that I tutored a struggling reader and actually have seen him become a better reader through these tutoring sessions, I feel that I am prepared to take on the responsibility of teaching struggling readers in my classroom. I now feel confident that I know what I have to do to meet the instructional needs of all my students."

Commeyras, Reinking, Heubach, and Pagnucco (1993) found that the preservice teachers in their research felt, on average, "moderately prepared" to teach reading after one reading education course. They offered the following interpretation surrounding this result:

The seriousness of students' expression of insecurity is related to what one assumes is the objective in teaching reading methods courses. If one believes that taking a course on the teaching of reading in elementary school should lead to feeling fully prepared to teach reading, then the students' expressed lack of confidence is troubling. If on the other hand, one believes that taking a course on the teaching of reading should provide a foundation from which students can continue to learn about teaching reading through experience in the classroom and additional course work, then there will be less concern with the finding (p. 303).

We interpreted students' expressions of preparedness to teach struggling readers somewhat differently, as we deemed it important for the preservice teachers to feel prepared to teach struggling readers as a necessary first step for these beginning teachers. We nonetheless acknowledge that these students' perceptions of preparedness may not necessarily indicate actual preparedness to teach struggling readers effectively; however, we feel confident in asserting that these future teachers would be more likely to attempt to teach struggling readers effectively in their future classrooms if they felt prepared to do so.

Preservice teachers valued diagnostic assessment to inform their instruction of struggling readers. Eighteen of the 22 preservice teachers (82%) detailed the importance of using diagnostic assessment to inform the instruction of struggling readers. During their coursework, students were taught how to administer and analyze running records (Fountas & Pinnell, 1996); administer and interpret informal reading inventories (Leslie & Caldwell, 1995), various early literacy assessments (Johnston, Invernizzi, & Juel, 1998), and spelling inventories (Bear, Invernizzi, Templeton, & Johnston, 1996); and utilize other informal assessments such as anecdotal records (e.g., Rhodes & Nathenson-Mejia, 1992) and interviews (Shearer & Homan, 1994). The preservice teachers used these assessments to determine the strengths and needs of the struggling readers they tutored and, in the process, learned many valuable lessons. As Linda stated succinctly, "Effective teaching begins with a good assessment that helps the teacher determine where to begin." Similarly, Shanta explained, "I learned that it is very important that you assess your students so that you can know what areas of instruction you need to target the most, or what you need to reinforce for the struggling readers you are teaching." Angie commented, "Do not assume that a student is a struggling reader based on such things as standardized test scores, student files, or past teachers' comments. Assess the student yourself." Finally, as Ann articulated:

The first thing I must do is find time to assess each and every one of my students. I do not feel that I can plan adequate whole group reading lessons or guided reading group lessons without knowing something about each of my individual students as readers. The first thing that I want to know is what their attitudes about reading are... By assessing my students, I can also find out what type of previous reading experiences that they have had and what type of topics and literary texts might interest them... The final reason that I feel I must assess my students is so I know what their strengths and weaknesses in reading are, and what independent and instructional reading level they are on.

The research of Mallette et al. (2000) also found that preservice teachers "realized the importance of multiple and continuous assessments" in their work with struggling readers (p. 610). Given the important role that assessment appears to play in the learning and instruction of preservice teachers, it is of concern that "the preparation of teachers for assessment is limited" (Fisher, Fox, & Paille, 1996, p. 430). If we as a research community expect teachers to use "common sense" with regards to high-stakes assessments and to "construct more systematic and rigorous assessments in classrooms (Hoffman et al., 1999, p. 257), then we view it as necessary to support preservice teachers in learning how to implement and utilize diagnostic assessments in reading.

Preservice teachers requested assistance in the use of assessment and/or instructional strategies prior to and during their initial instruction of struggling and non-struggling readers. Although the majority of the university-based instruction for the preservice teachers ended prior to their second internship, most of these students requested additional information from the first author

during their internships. Fifteen out of 22 (68%) of the preservice teachers requested the assistance of the first author during their work in their internship settings, asking for assistance in interpreting assessment information, using assessments to inform instruction, and planning instruction. Students contacted the first author predominantly through email communications and telephone contacts to obtain assistance. For example, after assessing the student she would tutor, Allyson emailed, "I would appreciate any insight you might have on how to get started on tutoring my child. Where do I need to start?" Lucy requested similar assistance: "The child I have chosen [to tutor] is much lower than I expected. I am not sure what to do... I am afraid that if I try to take running records and have her read that she will become really frustrated. Should I just concentrate my tutoring on recognition of letters and possibly beginning sounds?" Dru reflected, "I had to ask you [about] what I thought I should be doing with Adam [tutored student], but the answers were in my results from the assessment." Angie asked, "Could you offer any suggestions on how to get [name of student she was tutoring] to stop relying on the illustrations and start focusing on sounding out the words more? Is it okay to play games (like the ones that we made last quarter) during the tutoring session?"

In their research on the value of reading tutoring experiences in the education of preservice teachers, Worthy and Prater (1998) concluded that "further growth in learning and teaching may be possible when experiential learning and critical reflection are situated in the atmosphere of community built on respect and caring relationships between and among teachers and learners" (p. 494). Based on our research, we reach a similar conclusion: preservice teachers need the support and assistance of teacher educators beyond the confines of the university setting.

Preservice teachers valued their experiences tutoring struggling readers. Twenty of 22 (91%) of the preservice teachers viewed tutoring a struggling reader as being one of the most beneficial experiences in their reading education coursework in terms of preparing them to teach struggling readers in their future classrooms. For example, Hannah stated, "My time with my reading student has been one of the most wonderful learning times since I have started my reading program. I feel that I will walk away from this taking away a great deal about teaching reading." Linda explained:

Now I understand why so many people say that experience is the best teacher. While I seemed very confused and apprehensive about teaching a struggling reader [at the beginning of the semester], I soon learned that many things seem to fall into place once you have a student in front of you who must be taught. Although I believed that all of the things that we have been learning in class were true before the field experience, it was not until I was able to experience teaching a struggling reader for myself that I was able [to] understand the importance of all of the strategies that I have learned.

Although the first author experienced firsthand the power of tutoring and clinical work, and was well aware of the research on the power of teaching one child to read as a component of teacher education programs (e.g., Broaddus & Bloodgood, 1999; Morris, Ervin, & Conrad, 1996), she began to doubt the utility of tutoring in terms of teacher education due to her experiences in the reading education course that she taught previously. In this course, the majority of the preservice teachers reported that it would not be possible to tutor struggling readers individually when they were classroom teachers and, as such, that their tutoring experience in their reading education course had little value to them. The first author made clear to the students in the second course that the purpose of this tutoring experience was to help them

to learn how to teaching diagnostically and reflectively, and the principles of instruction that they learned through the work with one struggling reader could be modified and adapted to their work in the classroom setting. As an example of students' understanding of this idea, Ashley concluded that, "I learned a great deal from this experience. As a classroom teacher I will not always have the opportunity to work one on one with a child like I was able to do in this case. However, this experience followed me into the classroom, where I taught whole class reading lessons...I was able to look at what Joe [tutored student] did and did not respond to and keep that in mind when I formed the whole class lessons."

The results of this research suggest that most of the preservice teachers in this reading education course were able to see how their tutoring experiences could inform their future instruction of struggling readers in the classroom setting. We view this as an important beginning. As Delpit (1992) explained, "When teachers are committed to teaching all students, and when they understand that through their teaching change can occur, the chance for transformation is great" (p. 302).

## **LIMITATIONS AND IMPLICATIONS**

This research has several limitations. First, the results of this research were determined by an analysis of the assignments that students submitted during their coursework, and were therefore influenced by the nature of the assignments themselves and the instruction that was provided in the preservice teachers' university coursework with a field component. Specifically, the first author, who is a former elementary school classroom teacher and reading specialist, holds a balanced perspective toward literacy instruction, and is particularly interested in research and practice surrounding struggling readers. These interests and experiences affected the instruction she delivered. Additionally, the second author, who is a former elementary school classroom teacher and administrator, holds a balanced literacy perspective and is committed to instructional reform in reading instruction on a systemic level. These experiences and interests affected all aspects of our data analysis. Second, this research was conducted with one cohort of students, and thus may not be transferable to other preservice teachers. Third, data sources were limited to students' coursework assignments and email messages.

Despite these limitations, we believe that this research holds several implications for further research and instruction. First, additional research is needed to determine the relationship between educators' abilities to integrate their personal, practical, and professional knowledges and their teaching effectiveness. As Anders, Hoffman, and Duffy (2000) asserted and as we concur, "we have continued to struggle with conceptions of teacher knowledge, beliefs, attitudes, and habits--how they are formed, how they are affected by programs, and how they impact development over time" (p. 725). As teacher educators who observe the instruction of preservice teachers in their internship settings, we have begun to encourage our preservice teachers to articulate not only what they plan to teach, but also their rationales for why they chose particular instructional methods and strategies based on their beliefs, best practices, and the research and theory that they have read and discussed. We view this approach to observation and evaluation of preservice teachers as essential in helping these future teachers develop the "mindfulness" (Duffy, 1997b) that excellent teachers possess. We hope that future research in this area could begin to address how teacher educators build on preservice teachers' knowledge in their coursework, the relationship between preservice teachers' knowledge and their own instruction of

elementary-school students, and the knowledge evolution of preservice and inservice teachers related to teaching struggling and non-struggling readers. Through our research, we uncovered the value that preservice teachers placed on ongoing contacts with their university instructor and on experiences working directly with struggling readers. Additional research is needed that explores whether these experiences served as the impetus for the preservice teachers' knowledge growth and what additional experiences are needed to help preservice teachers learn more about how to teach all children to read.

Second, although it was troubling that students held many misconceptions and misunderstandings throughout their coursework, this research suggests the need for university-based educators to consider the use of open-ended assignments to assess student learning so as to provide them with opportunities to address these misunderstandings as they arise. It was clear from this research that the preservice teachers were able to articulate verbatim information from their readings and from class discussions quite well, but that oftentimes the students were not able to apply this information. As a result of this research, we have begun to explore how we can more effectively address students' misconceptions and misunderstandings in their coursework. For example, we now share with our preservice teachers explicit definitions and explanations of common concepts and terminology related to reading research and instruction.

Third, this research suggests the need for university educators to support preservice teachers in learning how to offer professional, constructive criticism rather than to express criticism in negative and unproductive terms. For example, some of the preservice teachers in this study stated that the reading instruction in their classrooms "sucked." We see it as necessary to help preservice teachers express concerns about reading instruction that they observe in a professional manner. However, models for how preservice teachers can be supported in learning to express criticism and concerns in a professional way are limited. Perhaps future research could explore the use of peer coaching (Kurtts & Levin, 2000) as a starting point to help preservice teachers learn to express concerns and questions in professional ways.

Fourth, the role that internships play in helping preservice teachers to develop understandings related to best practices in reading instruction needs to be examined further. We found it troubling that some of the preservice teachers in this study discarded research and theory discussed in their university coursework when it conflicted with their experiences in their internship settings. As Worthy and Prater (1998) summarized, "The literal and figurative distance between the theory presented at a university setting and the realities of schools... are simply too great to ignore" (p. 486). The role that research and theory plays and should play in coursework needs to be explored.

Fifth, the results of this study suggest the need for coursework to focus, at least in part, on the instruction of struggling readers. It was clear that, despite completing a course that focused on general reading education principles and practices, the majority of preservice teachers in this study did not feel prepared to teach these students until they received instruction that addressed directly teaching struggling readers in the elementary school classroom. Specifically how this coursework should be designed in preservice teacher education programs needs to be investigated more thoroughly.

Sixth, this research suggests the need for reading education coursework to include not only discussion of and reading about diagnostic reading assessments, but also the need for preservice teachers to use these assessments to inform their instruction. We see preservice teachers' use of these assessments as a potential key in helping them learn to teach struggling and non-struggling readers effectively. Moreover, we view the need for educators to learn how literacy assessments can and should be used to guide meaningful instruction for elementary school students rather than for solely "high-stakes" purposes.

Seventh, the results of this study suggest the need for preservice teachers to be supported in their instruction beyond their university coursework and the potential of informal coaching in helping preservice teachers to apply the knowledge that they learn in their university coursework to their reading instruction. Clearly, learning how to teach struggling and non-struggling readers effectively cannot be a "one-shot deal." Teacher education and staff development must continue beyond undergraduate-level university coursework. As Dick Allington (2001) concluded in his book on "what really matters for struggling readers," developing the instructional expertise of every teacher, reorganizing schools so that supporting teacher development is, as they say, Job Number 1, is the only strategy that I can find substantial research support for" (p. 147).

We have learned the value of serving as "scholar teachers" (Moss, 1994) in our university-based reading methods courses. As Anders, Hoffman, and Duffy (2000) concluded, "we must commit our energies to studying our programs, our courses, our teaching, and our expectations and requirements. In short, it means consenting to be the subject of study ourselves. It will take courage and creativity. Now is the time to start" (p. 734). We continue to use the results of this research to inform and improve our instruction at the university level. We continue to implement research in conjunction with our preservice teachers to improve our practices and to support their learning. We encourage other university-based educators to do the same.

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