Understanding Preservice Teachers’ Beliefs and their Constructions of Knowledge for Teaching Reading to Struggling Readers

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Abstract
This study examined six preservice teachers’ beliefs about struggling readers, as well as their constructions of knowledge for how to teach reading. Interview and artifact data were analyzed to relate preservice teacher beliefs to knowledge construction. Analyses revealed that without practical experiences with reading instruction, preservice teachers’ beliefs centered on student and home deficits, and their construction of knowledge consisted of simple solutions. With more practical experiences, however, preservice teachers’ beliefs shifted to focus on the role of teachers and instruction, and their knowledge construction became more sophisticated. Implications for structuring teacher education programs are discussed.

Keywords
Preservice teachers, beliefs, construction of knowledge, reading, struggling readers, reading instruction, teacher education

Cover Page Footnote
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Understanding Preservice Teachers’ Beliefs and Their Constructions of Knowledge for Teaching Reading to Struggling Readers

Federal educational policies such as No Child Left Behind (NCLB), the Elementary and Secondary Education Act (ESEA), and the Individuals with Disabilities Education Act (IDEA) emphasize the use of proven educational methods. The argument behind the use of proven educational methods, or evidence-based practices, is that student achievement will increase if teachers implement those practices that have been proven effective through scientific research. Funding initiatives, such as Reading First, support schools by providing funds to purchase instructional materials and implement professional development thought to support students’ reading achievement. Simply “giving” teachers materials and knowledge, however, is not considered an effective approach to teacher education, as traditional “sit-and-get” or one-way transmission models of professional development have been proven ineffective (Richardson & Placier, 2001; Showers & Joyce, 1996). Rather, teacher learning is complex and contingent on relationships among teacher education efforts and teacher knowledge, prior experiences, practices, and beliefs (Brookhart & Freeman, 1992; Leko & Brownell, 2011; Pajares, 1992; Richardson, 1996).

The literature on teacher beliefs indicates that beliefs are influential in teacher practice and teacher learning (Richardson, 1996). Harste and Burke (1977) studied teacher beliefs and found that teachers make decisions about reading instruction based on their beliefs or theoretical orientations. DeFord (1985) developed the Theoretical Orientation to Reading Profile (TORP) instrument, which was found to have a strong relationship with teachers’ observed reading practices. In their study of teacher practices in reading, Richardson, Anders, Tidwell, and Lloyd...
(1991) found that teachers' practices concerning reading instruction could be predicted from interviews about their beliefs. Furthermore, people tend to use their prior experiences and beliefs as filters for incoming information (Hollingsworth, 1989; Pajares, 1992; Richardson, 1996). Thus, decades of research indicate that teacher beliefs, learning, and practice are relatively inseparable.

The research linking teacher beliefs to their practices makes it clear that teacher educators cannot discount the powerful role prior experiences and beliefs play in teacher education. To create preparation programs that are responsive to the needs of preservice teachers, a necessary first step is understanding the beliefs preservice teachers bring to the preparation context. As Pajares (1992) stated in his review of research on teachers’ beliefs, “unexplored entering beliefs may be responsible for the perpetuation of antiquated and ineffectual teaching practices” (p. 328). Once teacher educators uncover preservice teachers’ beliefs, then they can use this information to make sound decisions about program curricula, structure, and direction (Pajares, 1992).

There is a small research base already in existence on preservice teacher beliefs about reading instruction. The majority of these studies investigate how preservice teachers’ beliefs change as a result of being enrolled in reading coursework and field experiences. For example, Nierstheimer, Hopkins, and Dillon (2000) studied what 67 preservice teachers who were enrolled in a Corrective Reading course believed should be done to help struggling readers. Before completing the course the preservice teachers assigned the responsibility of reading instruction to someone else (i.e. parent, reading specialist, tutors). After the course, the preservice teachers felt that they could employ specific instructional practices to help struggling readers. Many of the students also shifted their beliefs to include inadequate classroom instruction in reading as a
source of students’ reading difficulties. Similarly, Duffy and Atkinson (2001) analyzed the class assignments of 22 preservice teachers enrolled in reading education courses to see how these students’ beliefs about struggling readers evolved over the course of a year. Results indicated that the preservice teachers’ ability to analyze reading instruction in terms of theory and best practice improved, and they felt more prepared to teach struggling readers. The preservice teachers valued diagnostic assessment to inform instruction, as well as their experiences tutoring struggling readers.

Researchers have also used several scales to assess preservice teachers’ literacy beliefs. Shaw, Dvorak, and Bates (2007) administered the TORP and the Teacher Self-efficacy Literacy Scale (TSELS, Johnson & Tschannen-Moran, 2003) before and after a reading methods course. Posttest scores indicated that the preservice teachers’ beliefs shifted in favor of a phonics and skills-based approach to teaching reading and that the preservice teachers’ sense of self-efficacy for teaching reading increased. Linek, Sampson, Raine, Klakamp, and Smith (2006) used the Philosophical Orientation to Literacy Learning (POLL) (Sampson, Linek, Raine, & Smith, 2001) to assess eight preservice teachers’ changes in literacy beliefs over the course of a year. Linek and his colleagues found that the preservice teachers’ beliefs about reading shifted to include comprehension and the idea that teachers should make reading meaningful. The data indicated that key factors in changing the preservice teachers’ beliefs were experiences in which they were successful in implementing an idea in a classroom setting with children.

The above research on preservice teachers’ beliefs indicates that their beliefs can change over time as a result of reading methods coursework and field experiences. Most beneficial were practical teaching experiences in which the preservice teachers could apply their newly acquired reading coursework knowledge. Also, preservice teachers’ seemed to feel more confident in their
abilities to teach reading. Although these studies contribute to the growing body of knowledge on the role of preservice teacher beliefs and practice, particularly in the area of reading, several questions remained unanswered. Few of these studies attended to preservice teacher beliefs about struggling readers; rather, the studies assessed preservice teacher beliefs about reading instruction more generally. Additionally, few of these studies examined the connection of preservice teacher beliefs to their constructions of knowledge for teaching reading. In other words, it is still unclear how preservice teachers’ beliefs shape how they envision effective reading instruction, particularly for struggling readers.

In hopes of attending to some of the unanswered questions regarding preservice teachers’ beliefs about reading instruction for struggling readers, the purpose of this study was to understand how preservice teachers’ beliefs and perceptions of struggling readers influence their construction of knowledge about teaching reading. The research questions guiding this study were: (a) what beliefs do preservice teachers hold about struggling readers? (b) how do the beliefs preservice teachers hold about struggling readers influence their construction of knowledge on teaching reading, and (c) what is the influence of practical teaching experiences on preservice teacher beliefs and constructions of knowledge for teaching reading? With answers to these questions, perhaps teacher educators will have more information about structuring effective reading methods courses that will help produce a generation of beginning teachers who are better equipped with effective reading practices for struggling readers.

Methodology

The theoretical perspective guiding this study was constructivism, in which participants’ perceptions and meaning-making are of primary importance (Lincoln & Guba, 2000). This
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perspective was appropriate, because the study’s focus was preservice teachers’ beliefs and how these beliefs helped them construct knowledge about reading instruction.

Participants

Six female preservice teachers (identified with pseudonyms) enrolled in a beginning reading methods course (comprised of 28 females and 1 male) participated in the study. The ages of the participants ranged from 20-23. Five of the participants were Caucasian and one was African American. The participants were all junior level education majors enrolled in their first reading methods course.

These participants were invited to join the study, because they were special education majors with varied prior experiences with reading instruction. Two of the participants had more extensive educational experiences with struggling readers. Sally was a mother to a three-year-old son who was at the emergent stage of literacy and who exhibited signs of delayed verbal skills. Additionally, Sally’s younger brother had a hearing impairment that impacted his reading negatively. Heather had been employed as a long-term substitute teacher and had extensive tutoring experiences with secondary special education students. The other four participants, Audrey, Katie, Lisa, and Nelly, experiences were limited to their own K-12 schooling.

Reading Course

During the study the preservice teachers were enrolled in a beginning reading methods course. This was the first reading course in their preparation program. The beginning reading methods course met once a week for 3 hours and was taught by a faculty member in the special education department, who was not a member of the research team. The course format was comprised of instructor led lectures and demonstrations and individual and small group activities. There were multiple assignments for the course including: small group and individual
lesson demonstrations, a classroom observation paper, a case study assignment, a core teaching plan, and a weekly field placement experience.

The focus of the course was on beginning reading practices and was structured around the five areas of reading (phonemic awareness, phonics, fluency, vocabulary, and comprehension), as defined by the National Reading Panel (2000). It also emphasized the need for systematic and explicit instruction. The course also included extensive information on various reading assessments and core reading programs such as Harcourt Trophies® and Open Court®. Finally, the course was paired with a field placement in which preservice teachers volunteered in an elementary school classroom four mornings a week. The field placement provided an opportunity for preservice teachers to observe and participate in classroom reading instruction.

**Data Sources**

**Interviews.** The primary data source was interviews, which occurred at the beginning, middle, and end of the semester. The interviews were structured to capture how the preservice teachers’ knowledge and beliefs regarding reading instruction changed throughout the semester. The interviews were semi-structured and questions centered on preservice teachers’ beliefs about why some children struggle with reading as well as appropriate instruction for struggling readers. Each interview lasted 30-45 minutes.

**Course assignments.** We also analyzed the preservice teachers’ case study assignments. For the case study, participants assessed a student in their field placement using various instruments including DIBELS, concepts of print, and informal reading inventories (IRI). After completing the assessments, the preservice teachers wrote a report of the results and developed an instructional plan that would address the student’s weaknesses.
Beliefs survey and concept maps. Participants completed pre- and post-concept maps and pre and post beliefs about reading surveys. The pre-concept maps and beliefs surveys were collected within the first two weeks of the course and the post-concept maps and beliefs surveys were collected the last week of the course. For the concept maps, participants were asked to brainstorm ideas related to struggling readers. The beliefs about reading survey consisted of six open ended questions about: (a) reasons why some children struggle with reading, (b) ways to support them in reading, and (c) prior experiences with reading and reading instruction.

Data Analysis

The data were analyzed using grounded theory methods (Glaser & Strauss, 1967). One method of grounded theory is constant comparative analysis. This type of analysis helps the researcher compare people, incidents, categories, and data with categories (Charmaz, 2000; Glaser, 1978). We began the grounded theory process with open coding. During open coding, we created labels or codes for the interview and beliefs survey data line by line. Next, we created axial codes by reassembling the data and making connections between categories and subcategories (Strauss & Corbin, 1990). Table 1 provides a sample list of the axial and selective codes that emerged from the study.
Table 1

*Sample Axial and Selective Codes*

<table>
<thead>
<tr>
<th>Selective codes</th>
<th>Axial codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical experiences</td>
<td>Babysitting</td>
</tr>
<tr>
<td>Experiences w/struggling readers</td>
<td>Incorrect instruction</td>
</tr>
<tr>
<td>Instructional shortcomings</td>
<td>Lacks reading skills</td>
</tr>
<tr>
<td>Student deficits</td>
<td>Low SES</td>
</tr>
<tr>
<td>Home deficits</td>
<td></td>
</tr>
<tr>
<td>Pre-internship</td>
<td>Family member w/ disability</td>
</tr>
<tr>
<td>Class demos</td>
<td>Not enough instruction</td>
</tr>
<tr>
<td>Lack of individualized inst.</td>
<td>Dislike of reading</td>
</tr>
<tr>
<td>Learning disabilities</td>
<td>Inadequate materials</td>
</tr>
<tr>
<td>Insufficient oral language</td>
<td></td>
</tr>
<tr>
<td>Field exp. Substitute teacher</td>
<td></td>
</tr>
<tr>
<td>Student assessments</td>
<td>Volunteer tutor</td>
</tr>
<tr>
<td>Mismatch of curricular materials</td>
<td>Doesn’t practice</td>
</tr>
<tr>
<td>Reading is not a priority</td>
<td></td>
</tr>
<tr>
<td>Classroom obs.</td>
<td>Absence of explicit, systematic inst.</td>
</tr>
<tr>
<td>Insufficient practice</td>
<td>Vision problems</td>
</tr>
<tr>
<td>Apathetic attitude</td>
<td>Poor nutrition</td>
</tr>
<tr>
<td>No modeling of reading</td>
<td></td>
</tr>
</tbody>
</table>

In the final stage, selective coding, we coded the data conceptually and selected codes that were pertinent to the derived theory. To further support our findings, we completed memoing for the case study assignments and concept maps data.

As a means of ensuring trustworthiness and credibility, we discussed the emerging findings with the participants and solicited their feedback, thus serving as a form of member checking. We also triangulated the data by looking for consistencies across multiple participants and across multiple data sources. Finally, we looked for disconfirming evidence that was inconsistent with the emerging theory (Brantlinger, Jiminez, Klingner, Pugach, & Richardson, 2005).
Beliefs about Reading Instruction for Struggling Readers

At the heart of this investigation were preservice teachers’ beliefs about why some children struggle with reading. We discovered that, in the absence of practical teaching opportunities, most preservice teachers adopted a deficit perspective to explain why children struggle in reading. Preservice teachers focused on students’ individual characteristics such as disability, individual learning styles, and skill deficits to explain why children struggled to read. For example, in her first interview Heather described students not having necessary skills because, “they didn’t learn what they were taught.” Five out of the six participants mentioned that students did not have the proper phonemic awareness and phonics skills, and indicated that even though these skills were taught the students seemed to not retain them.

The preservice teachers then spoke at length about the impact a child’s home environment has on his or her ability to learn to read. All six participants referred to home factors as being influential in helping or hindering children’s reading. Ideas mentioned included limited access to books, limited modeling and encouragement, and not being read to at home. In an interview, Audrey emphasized the role of parents by stating, “I think it has to do a lot with parenting in the beginning. I think parents really have to spend a lot of time with their kids.” Similarly, Nelly discussed the role of modeling by saying, “students don’t have people at home saying to them—hey read this good book.”

Finally, the preservice teachers spoke of instructional shortcomings, but only half made any reference to the role teachers, instruction, or schools play in helping children learn to read. Katie said, “we’re labeling these kids at such an early age” and “that stigma, those expectations, really do play a role.” Nelly talked about how children might all be taught the same way and that,
“you have to catch what’s going to help certain students.” Finally, Audrey described how, “teachers do hold some responsibility” for students being passed to the next grade level though they are unable to read. Few of the participants talked about the teacher’s role and when they did, the comments were brief fleeting phrases that appeared only once in the interview and not at all in the concept maps or beliefs survey.

Perhaps not surprisingly, after the preservice teachers completed the reading methods course, including its field experience component, participants’ emphasized the role of the teacher and instruction more than student or home deficits. All six of the participants mentioned that children might struggle with reading because of improper, insufficient instruction. Katie summed this notion when she said, “I guess the biggest thing is instruction that I didn’t include before. I don’t think I put any emphasis one that and instruction is obviously going to make a huge difference as to why kids struggle. Last time I went straight to oh well, they don’t have the right tools, but they have to be given those tools by their teacher.” Katie, like the other participants, did not abandon her initial reasons for why children struggle with reading. She still mentioned disabilities and parental involvement, but her beliefs shifted to emphasize more heavily the role of the teacher and instruction.

Audrey also re-evaluated her original thoughts about the influence of parents. She said, “everyone’s circumstances are really different and ideally each parent would read with their kid, model great reading, read all the time, but we know we can’t always get that, so I do want to place a lot of emphasis on what is going on in the classroom more so than anything else.” Similar to Audrey, Lisa discussed the roles of parents and teachers. Lisa still felt that not having books in the home was detrimental, but she also included ideas about teachers by stating, “maybe a teacher did not find a way to make things click with the student in reading.” These preservice
teachers are beginning to have a more sophisticated outlook on reading instruction, realizing that
the level of home support will vary for each child, and as a result what happens in the classroom
is of paramount importance. In the following sections we look at the preservice teachers
knowledge of reading instruction.

**Constructions of Knowledge for Teaching Reading**

**Simplistic solutions.** At the beginning of the study, most of the preservice teachers
focused on simplistic solutions when asked how teachers should teach reading to struggling
readers. For example, Audrey spoke about the power of motivation when she said, “encouraging
it, modeling it, making reading a priority in your classroom.” Four participants, said to teach
struggling readers, teachers need to read out loud to them. Katie epitomized this notion when she
said, “I think the best way teachers can help struggling readers is by reading to them. Your
greatest ally is having a good book.” The responses of the majority of the preservice teachers
seemed to be generic and general.

**Sophisticated and evidence-based.** Three of the participants offered slightly more
specific responses at the beginning of the study. Sally, Lisa, and Heather all included the need
for more practice and small group or one-on-one instruction for struggling readers. Additionally,
they listed specific skills and instruction that the students might be in need of including
phonemic awareness and phonics. Heather said, “I think if you can determine what they need and
then pull them out and give them one-on-one time, then hopefully it will click.” Although she did
not go on to elaborate what the one-on-one instruction would focus on, her mention of assessing
students’ needs and responding to those needs in a small group was more consistent with
effective instruction compared to the other participants’ responses. One possible reason for
Sally’s and Heather’s more sophisticated responses could be their prior experiences with
struggling readers. As mentioned before, Heather was a substitute teacher and secondary special education tutor, while Sally worked extensively helping her son acquire literacy skills despite a possible verbal developmental delay. In answering interview questions, Heather drew on her prior experiences with students with disabilities, and Sally reflected on her son and brother.

Lisa’s exceptional wisdom is more difficult to explain. She, like the other participants, did not mention having extensive experiences like Heather and Sally. What might have differentiated Lisa from the others was her proclivity towards reflection. From her interviews, it was clear that she was an active participant in her field experience and that she was an astute observer. For example, when observing her field placement teacher constantly use whole group instruction, Lisa suggested that using small group learning centers to individualize instruction might benefit the students. Her responses were often in relation to specific incidents from her field experience, and she consistently evaluated how she might handle situations if she were the teacher.

Having had opportunities to apply reading knowledge in practical settings throughout the semester, the interviews indicated that all of the participants’ responses had moved from simplistic solutions to more sophisticated, interventionist, and evidence-based. All six participants mentioned the need for explicit instruction in reading, as well as the need to assess students’ reading skills and intervene when students need extra help. The participants also discussed the value of small group and one-on-one instruction to help struggling readers. The participants’ post-concept maps were more detailed and included all of the five components of reading.

Several course components seemed to be particularly influential on the preservice teachers’ beliefs and knowledge including: hands on learning experiences during the reading
course, the opportunity to conduct classroom observations during reading instruction, participating in reading instruction during the weekly field placement experience, the opportunity to learn professional terminology, and the case study assignment. As Audrey indicated, “I really liked the word sort we did. I understood more of what we were talking about after doing the word sort.”

The participants’ constructions of knowledge of how to teach reading were most evident in their case study assignments. As a result of this course component, the participants were able to implement and interpret several reading assessments to determine students’ strengths and weaknesses and then develop an instructional plan that would address the students’ needs. The preservice teachers formed instructional plans that included specific lessons and activities that would improve the students’ skills in reading. Katie reflected on how completing a miscue analysis of her student’s oral reading fluency helped her determine what mistakes her student was making.

Unlike their entering ideas of how to teach reading, after completing the case study assignment, none of the participants said that simply reading out loud or encouraging students to read would remediate students’ specific struggles with reading. When the preservice teachers realized that their case study students had problems with fluency, they made suggestions like partner reading, echo reading, and readers’ theater rather than only conducting read-a-louds in the classroom. Nelly provided a perfect illustration when she stated, “you can’t just say, oh they’re struggling, they need help in reading. You have to say something more specific like, oh they really have problems with fluency.”

Discussion and Implications
The findings from this study shed light on the beliefs about struggling readers that preservice teachers bring to their reading coursework. Furthermore, the results provide an initial framework for understanding how preservice teacher beliefs relate to their constructions of knowledge for teaching reading. Several conclusions can be made based on the data. First, without practical classroom experiences and experiences with struggling readers, the preservice teachers tended to focus on negative student attributes and home deficits as the predominant reasons for why some children experience reading struggles, thus supporting the prior work of Nierstheimer, Hopkins, and Dillon (2000). In the absence of such practical experiences, the preservice teachers’ constructions of knowledge tended to be general, simple solutions. For example, when preservice teachers believed students struggle because of not being read to at home, their ideas about how to teach reading centered on reading out loud to students. Similarly, when preservice teachers thought students were not being motivated at home, their constructions of knowledge for teaching reading centered on motivating students and making reading a priority in the classroom.

While reading a-loud and motivating students are important elements to effective reading instruction, they are not sufficient. Extensive research has indicated that effective literacy teachers of struggling readers modeled reading strategies, asked questions about text (particularly more open-ended, higher order questions) and provided students with specific feedback on their performance (Connor, Son, Hindman, & Morrison, 2005; Haager, Gersten, Baker, & Graves, 2003; Taylor, Pearson, Clark & Walpole, 2000). Moreover, these teachers provided considerable instruction in decoding, phonemic awareness, and alphabetic skills. This instruction was explicit and teacher-directed with opportunities to practice skills acquired in connected texts (Haager, et al., 2003; National Reading Panel, 2000; Taylor et al., 2000).
Second, once preservice teachers had opportunities to acquire reading content knowledge and pedagogical content knowledge and then apply this knowledge in practical ways, their beliefs shifted to the role that teachers and instruction play in helping students with reading. As preservice teachers began to focus more on what teachers should do to help students, their constructions of knowledge became more sophisticated and interventionist-oriented. The preservice teachers described reading instruction that needed to target individual students’ weaknesses. Furthermore, the preservice teachers drew upon the power of reading assessments, small group instruction, and reading instruction that is explicit, systematic, and comprehensive. Now the participants looked at any limitations in students’ abilities to learn to read as things to plan for rather than roadblocks to effective instruction. Heather described how teachers need to be aware of the students who have not come from literacy rich homes, because these are the students who will most likely need some reading intervention.

Finally, the course components that seemed to have the most influence on the preservice teachers’ beliefs and construction of knowledge were those that encouraged preservice teachers to situate their knowledge in practical settings, thus supporting Duffy and Atkinson (2001) and Linek et al. (2006). In particular, the case study assignment and the weekly field experience were the most helpful according to the preservice teachers.

In crafting effective reading methods courses, teacher educators should keep in mind that preservice teachers often draw on their own K-12 educational experiences in which they most likely had limited direct experience with struggling readers. During instruction, teacher educators should alert preservice teachers to the impact their beliefs may have on their use of effective reading practices. In addition to teaching the essential components of reading and strategies for helping struggling readers, teacher educators should also see their role as also helping preservice
teachers view themselves as the main source of instruction for students who struggle with reading and approach teaching with an attitude of responsibility rather than blame. It seems that the more practical experiences teacher educators can incorporate into their courses, the more likely preservice teachers' beliefs will center on the role of instruction in helping students learn to read and their constructions of knowledge for teaching reading will become more sophisticated and evidence-based.
References


