Abstract

Title of Document:	PRE-SERVICE READING TEACHERS AS TUTORS:AN EXAMINATION OF EFFICACY AND CONTENT KNOWLEDGE
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This research examined pre-service teachers' efficacy and content knowledge in the domain of reading. The Teacher Sense of Efficacy Scale (TSES) was adapted to create a domain specific reading TSES (RTSES). This scale was used to investigate whether the opportunity to engage in a one-on-one tutoring experience or the opportunity to observe children being taught reading related skills would result in differences in changes in efficacy beliefs of pre-service teachers enrolled in a required reading course. In addition, this research investigated whether observation or tutoring experiences in reading were related to changes in growth of pedagogical knowledge in reading. Analyses of pre-test and post-test data showed that both the tutoring and observation groups rated themselves higher in the area of reading teacher efficacy and grew in their reading content knowledge from the beginning of the course to the end. However, there was only a marginally significant difference in the amount of change between the tutors and observers in their total RTSES and RTSES reading motivation scores, and there was not a difference between group in RTSES reading assessment efficacy or reading content knowledge scores. Both of the marginal differences, total RTSES and the RTSES reading

motivation efficacy subscale, showed that the observers rated themselves higher in efficacy beliefs than the tutors after participation in this study. Additional analyses showed that reading efficacy and content knowledge were not correlated in either group, and that tutors with high pre-test efficacy scores did not use significantly more instructional practices while tutoring than those with low pre-test efficacy scores. However, 100% of tutors felt that the field experience should be implemented in future classes opposed to 57% of the observers. While the tutors had a hands-on experience that they found valuable, the observers who did not have a hands-on experience reported higher post-test efficacy scores. However, one may question on what these efficacy scores were based. This question suggests that there is a need for more research to further investigate whether this field experience is a benefit to pre-service teachers..

PRE-SERVICE READING TEACHERS AS TUTORS:AN EXAMINATION OF
EFFICACY AND CONTENT KNOWLEDGE

By

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Dedication

To Princess Madeline and Mary Cake, who were born into this adventure. To my sister,

Holly, who has always been my strength. To Mom and Dad, for inspiring me from a

young age to embrace life and pursue my dreams. To Mama and Pop whose humor

helped me through the most difficult days. To Gammy, for the many hours she spent

mothering my babies (and me). To Bob who helped me realize my potential. Most

importantly, to my loving husband, Craig, who is always encouraging and the love of my

life. In my life I loved you more.

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Chapter 1: Introduction

The arrival of the No Child Left Behind Act (NCLB) and the Reading First initiative in 2001 have imposed higher standards on teachers in the United States. At the same time, attrition rates of teachers continue to grow with the National Center for Education Statistics (NCES, 2001) reporting that one in every five new teachers leaves the teaching profession after only three years. Also, there is cause for concern based on the rising number of teachers retiring and the higher numbers of reported student enrollment (NCES, 2001). Given this, teacher educators and educational researchers should be concerned not only with how to train quality teachers but also how to increase the likelihood that individuals graduating from teacher education programs will remain in the profession.

It is my belief that if pre-service teachers are trained through quality programs that offer domain specific hands-on experiences, those pre-service teachers may be better prepared when they enter the classroom to meet the individual needs of the students they encounter. The needs of individual students are becoming more important in today's classrooms as the diversity of students continues to grow. Teachers today are expected to teach to a growing number of students who have varying special needs and cultural backgrounds. They are expected to teach language and reading skills to a growing number of children who have learned, or are in the process of learning, English as their second language. In addition, students enter school with varying levels of knowledge. Some know many sight words and have been exposed to many books, while other live in low SES homes where books are not available. Still, other children have cognitive deficits or language delays. All of the abovementioned factors have been found to have

an impact with how an elementary school student learns to read. (Snow, Burns, & Griffin, 1998).

Because reading is a necessary skill in today's society, teachers are expected to meet the needs of all of these various children and have them all reading at grade level. Indeed, creating skilled readers is one of the most important tasks an elementary school teacher faces. With all of these complexities confronting teachers with respect to teaching reading it has become more important for teacher preparation programs to train pre-service teachers for these new challenges. Thus, one may ask how courses within teacher preparation programs can prepare future teachers to instruct students in this fundamental area of reading. Some believe that more hands-on experiences could be the answer.

Teacher preparation courses are integrating tutoring and other field experiences as a way to allow pre-service teachers experiences with students in real world situations. This preparation is important because pre-service teachers are students enrolled in education courses learning content appropriate for their future careers, but they have not yet taken on the role of a student teacher in a school setting. Therefore, they may not have the opportunity to learn material from their university classes and directly apply it in a classroom setting. Since teaching is an applied profession, this classroom practice allows future teachers the experience of being in a real world classroom and applying the content knowledge from their university courses.

In addition, this real world experience may not only help increase teacher education students' knowledge regarding how to teach and meet the individual needs of students but it may also change their beliefs about their own ability to teacher. This is a notion known as teacher efficacy. Teacher efficacy may also be an important component

of teacher training programs since high levels of teacher efficacy in in-service teachers has been found to influence specific classroom behaviors known to yield achievement gains (Gibson & Dembo, 1984), and it is one of the main determinants of job satisfaction for teachers (Caprara, Barbaranelli, Borgogni, & Steca, 2003). Thus, examining and enhancing the efficacy beliefs of pre-service teachers may be one way to increase the effectiveness of teacher training programs. The purpose of the present research is to examine ways to measure and enhance pre-service teacher efficacy within the specific pedagogical domain of reading.

Having an opportunity to learn from a hands-on experience and apply the knowledge they are gaining in their university classroom may also help pre-service teachers gain a better understanding of the material they are learning. It should be noted that cognitive processes may vary based on the domain of thinking and task content (Rogoff, 1990). Thus, field experiences such as tutoring may prove to be more effective if situated within a specific pedagogical domain as this would give pre-service teachers the opportunity to focus their knowledge and effort. Yet research findings pertaining to field experiences among pre-service teachers are mixed and limited in scope, especially when it comes to examining domain specificity.

This research investigated my belief that allowing pre-service teachers the opportunity to tutor children in the specific domain of reading may be one way to both increase their pedagogical knowledge and enhance their efficacy beliefs. In general, it is my belief that having the opportunity to apply course material in conjunction with field experiences will increase the benefits of education courses for pre-service teachers. This research examined two field experiences, tutoring and observation, to compare pre-

service teachers who participated in one-on-one tutoring with a control group who participated in observations. This research focused on field experiences involving elementary school children and the impact tutoring and observing had on pedagogical knowledge and changes in pre-service teachers' efficacy in the domain of reading.

Definitions

Before proceeding, a clarification of certain definitions used throughout this work is in order. The words used in this study have been defined as follows for the purpose of this research:

1. Reading Teacher- An elementary school classroom teacher who is responsible for teaching reading.

2. Pre-Service Teacher- A student majoring in education and enrolled in education courses who has not started student teaching.

3. Self-Efficacy- The belief in one's ability to perform some action or to control one's behavior or environment, to reach some goal or to make something happen (Bandura, 1977).

4. Teacher Efficacy- A belief in one's capability to teach effectively (Plourde, 2002).

5. Reading Teacher Efficacy- A teacher's or pre-service teacher's belief in his or her own capability to teach reading effectively.

6. Field Experience- An opportunity for pre-service teachers to tutor or observe in a real world classroom environment.

7. Tutoring- A field experience wherein a pre-service teacher works one-on-one with an elementary school student on reading skills in a classroom learning environment.

8. Observation- A field experience wherein a pre-service teacher observes children completing reading or language activities in a classroom learning environment.

9. Strategies- Instructional techniques used to teach tutees. The theoretical notion of this term was not used in this research.

Research on Teacher Efficacy

Self-Efficacy Theoretical Framework

Self-efficacy is one's beliefs about one's capabilities to organize and execute actions required to perform specific tasks. Efficacy beliefs influence how people feel, reason, motivate themselves, and act (Bandura, 1993). Bandura stated that efficacy beliefs result from mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal (1977). Self-efficacy beliefs strongly determine and predict individual accomplishments (Bandura et al., 2001), and individuals who feel efficacious are more likely to persist longer on a task and set challenges for themselves (Plourde, 2002). Self-efficacy is especially important for those who mold our youth through teaching because a teacher's personal self-efficacy to motivate and encourage learning affects the type of classroom atmosphere the teacher creates and the level of overall student achievement (Bandura, 1993).

Teacher Efficacy and Teacher Practices

Bandura (1993) felt the job of creating environments conducive to learning rests greatly on the talents and self-efficacy of teachers. Plourde (2002) defined personal

teaching efficacy as a belief in one's capability to teach effectively. High teacher efficacy has been linked to a variety of positive outcomes in regard to teachers' practices. For example, high teacher efficacy has been found to be related to higher end of the year goals for students (Allinder, 1995). Gibson and Dembo (1984) suggested that teacher efficacy influences specific classroom behaviors known to yield achievement gains. Additionally, Gibson and Dembo believed that teachers who felt that effective teaching helped student learning and who had confidence in their own teaching abilities were more likely to persist longer in their efforts to teach and provide a greater academic focus in the classroom.

In conjunction with Bandura's (1993) notion that environments conducive to learning rest heavily on teachers' self-efficacy, Guskey (1988) found that teachers with high self-efficacy beliefs were more likely to embrace innovative techniques in the classroom. Furthermore, these techniques were more likely to be linked with mastery learning goals, which are goals that individuals pursue when their aim is to develop ability (Midgley, Kaplan, & Middleton, 2001). Likewise, efficacious teachers looked forward to being active members of the school community (Woolfolk & Hoy, 1990) and better served their students in need of special education (DeForest & Hughes, 1992; Meijer & Foster, 1988; Podell & Soodak, 1993).

Pre-Service Teacher Efficacy

Based on the positive relationship that high teacher efficacy has on multiple facets of teachers' work, many researchers have examined the impact of teacher efficacy on pre-service teachers as well. Woolfolk and Hoy (1990) found that pre-service teachers with high efficacy were less controlling in their thoughts about dealings with students, which

promoted autonomy in their students' choice of assignments. Autonomy has been shown to have great influence on children's motivation to read (Guthrie, Wigfield, & VonSecker, 2000).

In relation to efficacy beliefs and content knowledge, Enochs, Scharmann, and Riggs (1995) found a negative correlation between personal science teaching efficacy and the number of science courses a pre-service teacher had taken. Thus, students who had more coursework and more knowledge of science had lower beliefs in their ability to teach science. When comparing the efficacy ratings of pre-service and in-service teachers Benz, Bradley, Alderman, and Flowers (1992) found that pre-service teachers rated themselves as higher in efficacy beliefs than in-service teachers with regard to motivating students. This is despite the fact that these pre-service teachers had never had an experience motivating a student. These findings may lead one to question what efficacy beliefs are based on for pre-service teachers who have only coursework. In fact, pre-service teachers usually do not have actual teaching experiences upon which to base their teaching efficacy beliefs.

With regards to this idea Enochs et al. (1995) believed that opportunities for real world experiences need to be provided to pre-service teachers. In a study of one such real world experience, Parameswaran (1998) examined undergraduate education majors and found that students who participated in a field experience had higher efficacy than those who did not attend a field experience. However, field experiences have not always been found to have a positive impact on pre-service teacher efficacy. Newman (1999) found that pre-service teachers were more efficacious after taking a 10 week educational psychology course. In this case the field experience group did not differ in regard to

efficacy from a comparison group of students who did not have a field experience connected to class. In addition, Plourde (2002) found that pre-service teachers had a lower sense of confidence in their ability to make a difference in the area of science after completing student teaching within the specific domain of science.

In all, research shows contradictory findings as to the usefulness of field experiences for increasing pre-service teacher efficacy. It should be noted that the Newman (1999) and Parameswaran (1998) studies are limited because the participants were not tutoring in a specific subject domain or using a specific set of skills they were learning in a university course. Additionally, when students were given the task of teaching the specific subject of science they were found to have a lower sense of confidence in their abilities. One could argue that this lower sense of efficacy may actually temper expectations, as it is based on a more realistic sense of what happens in the classroom. Finally, there is a need for an examination on how a reading specific field experience relates to pre-service teacher efficacy and pedagogical knowledge.

Reading Education

Importance of Teaching Reading

Cunningham and Stanovich (1997) showed that reading acquisition in the 1st grade is linked to reading ability 10 years later. Also, research has supported that the quality of teachers has the greatest impact on student achievement (U.S. Department of Education, 2004). Considering this, it seems important that early childhood and elementary school teachers are prepared to teach reading and reading related skills in the most effective ways possible. Pre-service teacher education is one avenue in which educators can help develop teacher knowledge for teaching reading and preventing

student difficulties in reading. In the past, it was believed that in many instances little time was dedicated to preparing pre-service teachers to teach reading (Snow et al., 1998). However, with the implementation of NCLB teacher education has changed (U.S. Department of Education, 2002), wherein pre-service teachers are getting more instruction in scientifically based reading programs to prepare and train them as high quality teachers. To make the most out of pre-service teachers' instructional time at the university, effective practices should be in place.

Not only is it important to prepare teachers in the pedagogical practices of reading, but increased focus on reading education has been mandated by the Reading First initiative (U.S. Department of Education, 2002). This new initiative focuses on the five building blocks of teaching reading, and they have been supported by research to help children learn to read. While teaching children to learn how to read is a priority of the Reading First initiative, it is becoming an increasingly difficult challenge for teachers. In fact, out of the 48.2 million public school students in the United States, 4.1 million are English Language Learners, 6.4 million are served in programs for the disabled, and 15 million are served through the Title I program(U.S. Department of Education, 2004).

According to Morris (2005), the average elementary school teacher to student ratio in the United States is 1:24. The busy day of an elementary school teacher may only leave a small amount of time to meet the individual needs of each student in the area of reading. Therefore, it is important to train teachers to be effective in the teaching of reading. Teacher training programs may need to find new and innovative training techniques, such as tutoring, to promote pre-service teachers' pedagogical knowledge in the domain of reading. Likewise, if tutoring could simultaneously impact changes in pre-

service teacher efficacy, we may see a rise in both pre-service teacher pedagogical knowledge and efficacy within the domain of reading.

Purpose

This research was concerned with changes in pre-service teacher efficacy, particularly in the pedagogical practice of reading, during a course within a teacher training program. Specifically, the present research was interested in measuring whether the opportunity to engage in a one-on-one tutoring experience or the opportunity to observe children being taught reading related skills would result in differences in efficacy beliefs of pre-service teachers enrolled in a reading education course. In addition, this research investigated whether observation or tutoring experiences in reading are related to changes in growth of pedagogical knowledge in reading.

Research Questions

1. Are the differences in the amount of change in reading teacher efficacy and pedagogical knowledge in reading related to different reading field experiences, tutoring or observations?

2. Do pre-service teachers who have higher reported efficacy use more appropriate strategies while teaching reading?

3. Do pre-service teachers with higher reported efficacy have higher pedagogical knowledge?

4. Do pre-service teachers perceive field experience as influencing their changes in efficacy and knowledge?

Research Hypotheses

In uniting the two concepts of pre-service teacher efficacy and tutoring in reading, the hypotheses guiding this research were:

1. Pre-service teachers who have a one-on-one tutoring experience will demonstrate greater change in their reading teacher efficacy than pre-service teachers who do not have the opportunity to interact with students and only observe students during reading instruction,

2. Pre-service teachers who participate in the tutoring experience in reading and who report pre-test efficacy beliefs in the top 25% are more likely to report the execution of more reading strategies in their diaries than their peers with pre-test efficacy beliefs in the bottom 25%.

3. There will be a positive relationship between pre-service teachers' efficacy and pedagogical knowledge for both the observation and tutoring groups.

4. Participants will report that the field experiences, tutoring and observation were pertinent in changing efficacy and knowledge.

Chapter 2: Literature Review

This chapter explores the research on field experiences and tutoring, as well as the role these different experiences may play in pre-service teacher efficacy and knowledge of teaching reading as a specific content area. On the whole, this literature review suggests that we currently lack research exploring the possible benefits of simultaneously changing efficacy and reading knowledge in pre-service teachers through tutoring. To thoroughly examine this issue and unite these two areas of research, I will begin this chapter with an in-depth review of the literature on teacher efficacy. I will first discuss the research on teacher efficacy and examine the positive correlations teacher efficacy has with constructive teacher practices. Second, I will review the existing research on the efficacy beliefs of pre-service teachers as a unique population. Third, I will give a general overview of the five building blocks of reading education based on Put Reading First (2001) to provide a broad understanding of the topic of reading education. Fourth, I will review the literature on pre-service reading teachers' field experiences and tutoring, examining the potential benefits of tutoring and self-reflection on pre-service reading teachers' self-efficacy specific to the teaching of reading. Finally, I will summarize the findings of my literature review.

Pre-service Reading Teacher Efficacy and Tutoring: An Integration of Two Areas

How people feel, think, self-motivate, and behave are influenced by their self-efficacy beliefs (Bandura, 1993). Self-efficacy is the belief in one's ability to perform some action or to control one's behavior or environment, to reach some goal or to make something happen (Bandura, 1977). In fact, self-efficacy beliefs strongly predict individuals'

achievement (Bandura et al., 2001). When individuals feel efficacious, they are more likely to persist longer on a task and set challenges for themselves (Plourde, 2002).

Self-efficacy is also important to those who guide children's learning (Allinder, 1995). Personal teaching efficacy has been defined as teachers' individual beliefs in their ability to teach successfully (Plourde, 2002). Teachers' personal self-efficacy about their ability to motivate students and encourage learning has been shown to predict the type of classroom atmosphere they create and the level of student achievement (Bandura, 1993). With recent federal education policies, most notably the 2001 No Child Left Behind Act, and the increasing demands on teachers to improve children's academic achievement levels, the issue of teacher efficacy has become one of importance (U.S. Department of Education, 2002). In addition to the demands for academic improvement, teachers are facing more diversity in the classroom. Many teachers have students who do not speak English, have cognitive deficits, ADHD, or other behavioral problems. Thus, one goal of teacher educators and educational researchers should be not only to create programs that can increase the knowledge of new teachers but to help create the self-confidence needed for these teachers to handle the varying needs of individual students. Enhancing pre-service teacher efficacy may be one way to do both and is the focus of this research. .

In addition to focusing on pre-service teacher efficacy, this research also focuses on the specific domain of reading due to the increased focus on reading education and changes in reading teacher education that have been mandated by the Reading First initiative (U.S. Department of Education, 2002). The overall goal of this chapter is to review the literature on pre-service reading teachers and the possible benefits of using a hands-on learning experience, mainly tutoring programs, as a means of enhancing pre-

service teachers' efficacy for the teaching of reading. As such, this chapter will focus on what we already know about teacher efficacy and pre-service teachers as reading tutors. In general, we have found that many researchers have examined the construct of teacher efficacy and pre-service teacher efficacy, but little research has been done on pre-service teachers as reading tutors.

Literature Research

The primary databases used for this study were PsychInfo and ERIC. The self-efficacy research derived from these databases was reviewed using various key words. After refining the search due to broad findings and articles not germane to this investigation, the key words "teacher efficacy" revealed a list of 157 articles, many of which appeared pertinent. The terms "teacher efficacy" and "reading" were then reviewed and revealed only 12 articles.

As such, the key terminology "tutoring," "reading," and "pre-service" were reviewed and revealed 12 pertinent articles that discussed the actual tutoring of children in reading by an adult. In addition to these word searches, the *National Reading Panel Teaching Children to Read* (2000) and *Preventing Reading Difficulties in Young Children* (Snow, et al., 1998) were reviewed. It should be noted that both of these were reviews by national committees. As of 2000, when the NRP completed its in-depth search of the literature in reading, only seven experimental or quasi-experimental journal articles were published in peer-reviewed journals on the topic of pre-service teacher reading education. Snow and colleagues found a similar lack of research. Finally, a search was conducted to examine tutoring. The literature in this area was found to be quite substantial, therefore, it was determined that the articles most pertinent to this review

were those that focused on the pre-service teachers and the effect tutoring projects have on pre-service reading teacher education.

Self-Efficacy-Theoretical Framework

To begin this review, a discussion of the term self-efficacy and the major research findings on self-efficacy is in order. The term self-efficacy derives from Bandura's Social Cognitive Theory, which emphasized the notion that individuals are self-organizing, self-regulating, proactive, and self-reflecting in shaping their own learning and behavior. Bandura stated that efficacy beliefs result from mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal (1994). Furthermore, Bandura et al. (2001) suggested that personal factors such as cognition, affect, and biological events lead to an individual's sense of self-efficacy, which in turn will determine and predict accomplishments that the individual achieves. Bandura believes mastery experiences are the most effective way to create a high sense of self efficacy (1994). In mastery experiences success raises efficacy, while failure lowers efficacy. An example of a mastery experience is a pre-service teacher who is able to tutor an elementary school child in reading. Vicarious experiences, on the other hand, are those experiences wherein a model displays behavior one hopes to achieve. For example, a pre-service teacher who watches an experienced teacher instruct elementary school students in the area of reading is having a vicarious experience. She watches another engage in an experience but has not yet been engaged herself. Bandura supports the belief that if the model is successful, the observer's efficacy will grow. Verbal persuasion is the idea that others can persuade the individual that she can achieve a certain task, and physiological arousal is the way in which an individual interprets her own physical response to a situation.

Furthermore, Pajares and Schunk (2002) stated that human functioning is the product of actions between personal, behavioral, and environmental influences. This view is in conjunction with Bandura's triadic reciprocality that described interactions between these three influences, which in turn determines individual's behavior and efficacy beliefs (Pajares, 1996). In the triadic reciprocality, personal, behavioral, and environmental factors hold equal weight. For example, if teachers deem themselves as having a low level of ability to reach students in reading (personal), they may not persist in attempting to help students learn to read (behavioral). Additionally, if teachers believe that they cannot be effective due to their students' home lives or IQ (environmental), it is unlikely they will successfully engage in teaching reading (behavioral). These three factors interact with each other in such a way that changing one may result in a change in the other two. Theoretically, then, if one can change teachers' personal beliefs, one may also change teachers' behavior and the learning environment. In addition, one could do this through either a mastery experience or vicarious learning.

Why Teacher Efficacy Matters

Personal and General Teacher Efficacy

Due to the influence self-efficacy has on behavior, the idea of self-efficacy has been applied to teachers and is termed teacher efficacy (Armor et al., 1976). The definition of personal teaching efficacy is a belief in one's capability to teach effectively (Plourde, 2002). Therefore, teachers who feel efficacious believe that they, personally, can reach their students through pedagogical practices. This original concept can arguably be traced back to Rotter's "locus of control theory;" which questions whether or

not individuals believe they or the environment possess control of desired consequences or reinforcers.

Viewing Bandura's aforementioned triadic reciprocality in the realm of teacher efficacy, the idea of "personal teaching efficacy" can be said to relate to the personal aspect of the model. "Personally efficacious" teachers may feel they are able to reach and teach students despite the behavioral or environmental circumstances. This is beneficial to the student, as many teachers are faced with issues in their environment that are beyond their control, and a good teacher should continue to teach these students despite such circumstances.

Self-efficacy beliefs also relate to the choices people make and the actions they take (Pajares, 1996). For instance, teachers who feel personally efficacious in a certain subject may be more likely to make the choice to teach that subject. For example, a teacher who feels efficacious in the area of science will be more likely to persist in teaching difficult scientific concepts and show creativity when choosing material to teach. Thus, while teaching a unit on metamorphosis, this teacher may be more likely to bring a caterpillar into the classroom and have students watch the steps in which it morphs into a butterfly, as opposed to teaching straight from the text. In turn, this could lead to students having a more positive experience in their learning of science, as well as having a "hands-on" experience from which to draw upon.

General teacher efficacy is described as the perspective that teachers can or cannot do much based on their own belief (and the teaching behavior that follows this belief). In other words, the belief is that student motivation and achievement are based mostly on the environment (Woolfolk & Hoy, 1990). Teachers who are high in general

teaching efficacy believe they can do a lot to help student motivation and achievement despite the students' home environments. On the other hand, teachers who feel that students' environments are what motivate and help them to achieve may not be as likely to work as hard to reach students and may be less likely to play a role in student learning.

Personal and general teaching efficacy are based on the general principle that teachers who feel they can make a difference may try to do so. This principle is important for the field of education, as teachers make a difference to their students.

Teacher Efficacy and Teacher Practices

Teacher efficacy is important not only because it is a personal belief in one's abilities, but because it also relates to a teacher's overall classroom practices. Bandura (1993) stated that the task of creating environments conducive to learning rests heavily on the teachers' talents and self-efficacy. People who are efficacious set challenges for themselves and persist in their efforts until they achieve (Plourde, 2002). Gibson and Dembo (1984) suggested that teacher efficacy might influence specific classroom behaviors known to yield achievement gains. Thus, having a teacher with high efficacy beliefs may help students achieve more academically. Additionally, Gibson and Dembo showed that teachers who believed that effective teaching helped student learning and had confidence in their own teaching abilities were more likely to persist longer in their efforts to teach, provide a greater academic focus in the classroom, and exhibit different types of feedback.

In an examination using the Gibson and Dembo (1984) Teacher Efficacy Scale (TES) and Curriculum Based Measurement to assess student mathematics achievement, Allinder (1995) examined 19 special education teachers. The results revealed that

teachers with a high sense of personal and teaching efficacy had higher end-of-the-year goals for their students than those with low efficacy. However, this study was limited to a small sample of special education teachers. Thus, the question of whether or not there would be similar findings with general education, mathematics, or reading teachers remains.

Beyond the findings of Allinder (1995), Woolfolk and Hoy (1990) found that efficacious teachers were less likely to be controlling of their students and looked forward to being active members of the school community. With regard to the fact that they were found to be less controlling, these teachers may have been more likely to allow for students to make their own decisions. This autonomy can be beneficial to the students, as they may be more likely to have the opportunity to have choice in their assignments, which can make them more motivated to learn. Therefore, these efficacious teachers were more likely to allow student autonomy and go beyond the call of duty while contributing to the society of the school. This may have been done by attending community events, organizing school events, or working collaboratively with colleagues and administrators. The abovementioned practices are important to the teachers' students and the schools as a whole.

High Teacher Efficacy, Job Satisfaction, and Special Education

In addition to affecting teacher practices, teacher efficacy is one of the main determinants of job satisfaction for teachers (Caprara, et al., 2003). Given the high rates of teacher attrition, this is an important finding, as teachers who are content within their job may be more likely to stay in that career field. Caprara and colleagues examined 2,688 teachers in Italian schools and found that teachers perceived that self-efficacy

stemmed from mastery experiences that fostered achievement in the class and led to greater job satisfaction. Thus, teachers who were efficacious were more likely to enrich their teaching with experiences that were based on the idea of mastery learning goals, or goals that individuals pursue when their aim is to develop ability (Midgley et al., 2001). As such, these teachers perceived greater satisfaction in their jobs.

In addition, Taylor and Tashakkori (1995) used a national data set of 9,987 teachers to examine four constructs: decision participation, school climate, job satisfaction, and teachers' sense of efficacy. These researchers found that the best predictors of teachers' efficacy were faculty communication and a lack of obstacles when teaching, such as behavioral problems in the classroom. Teachers who were better able to communicate with other faculty and the administration felt better about the job they did with their students. Furthermore, when teachers dealt with fewer distractions, behavioral or academic, they felt better about teaching in general.

In addition to greater job satisfaction and better communication, efficacious teachers have been found to better serve their students in need of special education. DeForest and Hughes (1992) studied 68 elementary school teachers who taught 2nd and 4th grades in two urban school districts. Using the TES these teachers were divided into high and low scoring groups based on the Personal Teaching Efficacy portion of the scale. These teachers viewed videotapes displaying high and low involvement conditions with student and teacher scenarios. The researchers found that teachers' personal efficacy affected how they responded to a student's need for consultation. Teachers with a high sense of self-efficacy were more likely to feel in control of situations and were more willing to prefer consultation when dealing with students. During consultation, these

teachers exerted control over identifying the problem and assisted in implementing an intervention to help the student. On the other hand, teachers with low efficacy were likely to find consultation less effective and were more likely to want the consultant to provide more guidance in implementing the intervention.

Similarly, a study consisting of 230 Dutch teachers used a combination of various instruments to measure participant opinions (Meijer & Foster, 1988). The findings revealed that teachers with higher self-efficacy had lower ratings for referral chance, meaning they referred fewer students to special education. This may be due to the fact that these teachers felt they had a higher ability to reach students who had greater needs, although they did not meet special education requirements. One reason may be that the highly efficacious teachers were confident enough to deal with all students but were not afraid to bring in outside help when needed. The less efficacious teachers may have been afraid to tackle the needs of students first and may have resorted to bringing in outside help before attempting to deal with the situation on their own.

In addition, teachers who have low personal teacher efficacy have been shown to be more likely to refer students with mild learning problems to special education services (Podell & Soodak, 1993). A reason for this finding may be that when teachers do not believe they can affect students positively, they quickly refer them for outside help. Also, when teachers have low efficacy, they may not believe that teaching can overcome the effects of other influences, such as IQ or SES and therefore may be more likely to refer children to special education resources.

In sum, teachers who have high efficacy have been shown to be more satisfied with their jobs, have better faculty communication, and better serve their students with

special education needs. Thus, enhancing teacher efficacy for pre-service teachers may increase their future job satisfaction and aid them in better serving their students in need of special education services. Given these positive findings of research on teacher efficacy, one may question how to promote teacher efficacy.

Promoting Teacher Efficacy

Besides examining the correlates of teacher efficacy, research has also examined how to help teachers transfer the knowledge they obtain from their professional development experiences into the classroom and what influence teacher efficacy has on that implementation. Through various professional development opportunities, such as in-service training courses and continued university course work, teachers are able to alter their pedagogical practices in ways that allow for higher levels of teaching, learning, and efficacy. One of the practices that has been adopted by almost all teacher education programs is in-service training for teachers. For example, an in-service training could be a day long session that takes place in the elementary school in which the teacher works and focuses on a particular aspect of teaching.

In-services. In a study examining teacher in-service training, Guskey (1988) had 114 teachers from one suburban, one urban, and one rural school district who attended a one-day staff development program on mastery learning procedures fill out questionnaires immediately after the in-service. The questionnaires measured teacher efficacy, teacher attitude toward implementing mastery learning practices, which are goals that individuals pursue when their aim is to develop ability opposed to performance learning goals to demonstrate ability (Midgley, et al., 2001). A questionnaire that was distributed immediately after the workshop showed that teachers with high self-efficacy

beliefs were more likely to report that they embraced innovative techniques in the classroom, especially those linked with mastery learning goals. Such a teacher may be more willing to attempt to teach students through more challenging and interesting practices in an effort to engage and motivate.

The sample used in the study was differentiated, with teachers from urban, rural, and suburban school districts and showed generalizability of the findings to different environments. Despite this generalizability of the Guskey findings across different types of school districts the findings are still limited in that the in-service program was only one day long and the questionnaire was given immediately after attendance at the in-service. How a longer in-service would influence teachers' efficacy is still in question as are the long term affects of the in-service. Another limitation is that the researcher did not give the teachers a pre-test or use a control group. Therefore, we cannot assess whether any of the findings were related to actual participation in the in-service, as there were no means for comparison or growth.

Despite these limitations Guskey's (1988) findings are important in relation to the self-efficacy construct, as they facilitate a better understanding of what creates a constructive and successful classroom. In general, teachers who have high efficacy reported that they were more likely to use various practices within their classroom that add to their job performance. Further research in this area is needed to determine if teachers actually implement the learned methods and how long they continue to use these methods.

In a similar study, Fritz, Miller-Heyl, Kreutzer, and MacPhee (1995) implemented their Dare-To-Be-You in-service teacher training program with 130 teachers. This

training focused on designing activities that build self-esteem, internal locus of control, social skills, and decision-making abilities in the classroom that were believed to enhance general and personal teacher efficacy. Both this treatment group and a control group completed the TES (Gibson & Dembo, 1984) before and after the training session. Fritz et al. found that after the in-service the teachers who attended the training session had higher self-efficacy than those in the control group, despite the fact that both groups had equal self-efficacy pretest scores.

Likewise, Sparks (1988) examined teachers who attended a professional development in-service training called Stallings' Effective-Use-Of-Time. Pre-training and post-training observations, questionnaires, and interviews were used to examine changes in 19 junior high school teachers' behaviors and attitudes with regard to teaching. Results showed that teachers who were observed to be improving in their classroom pedagogy were more willing to put the newly recommended practices to use. Additionally, improving teachers had higher levels of self-efficacy. In contrast, non-improving teachers were less likely to use new practices and, therefore, failed to grow through the staff development experience.

In an effort to improve in-service professional development for teachers, Sparks (1988) found that one way to provide teachers with a higher sense of efficacy was to provide them with small support groups. These groups consisted of six or seven teachers, wherein the teachers attended the workshops together and worked on problem solving and sharing. Based on this research, Sparks believed change would occur and self-efficacy would grow if time were allotted for teachers to support each other in a safe atmosphere. Research has shown that pre-service teachers who were allotted an

opportunity to reflect and discuss their experiences with others were more likely to better

serve their students based on their reflections (Rushton, 2003). Thus, it seems that it may

be beneficial for teachers to dialogue with others in an effort to improve their efficacy

and understanding of students' needs. As stated, in-services are one way to provide

opportunities for dialogue and possibly build efficacy. Another possible way to promote

efficacy growth is additional coursework and the pursuit of further education.

Furthering education. Other research on promoting teacher efficacy has shown

that schools can promote the growth of their teachers' efficacy by offering assistance in

the pursuit of further education. When comparing 179 elementary school teachers' sense

of efficacy and school health, Hoy and Woolfolk (1993) found that general teaching

efficacy predicts institutional integrity and morale. Using the TES (Gibson & Dembo,

1984) and a questionnaire that measures school health, they found that teachers who

pursued graduate degrees were more likely to feel personally efficacious with regard to

teaching. This assistance can be given in a variety of ways, such as in-service classes that

offer teachers opportunities to further their education in the convenience of the school

setting. Also, school systems can offer money towards further education for their

teachers. It should also be noted that Hoy and Woolfolk suggested that aspects of

institutional integrity, the principal's influence, and academic emphasis are especially

important in supporting personal and general teaching efficacy.

One limitation with the notion that teachers who further their education are more

efficacious (Hoy & Woolfolk, 1993) is that one does not know if these teachers are more

efficacious before they begin their graduate courses or if the graduate courses lead to this

higher efficacy. It may be that teachers who are more likely to persist in and choose

difficult tasks are also more likely to welcome the challenges that graduate school offers; whereas, teachers who are less efficacious are not likely to pursue such a task in the first place. A longitudinal study may be needed to fully examine these issues.

In general, this research on promoting teacher efficacy shows that teachers who have the opportunity to attend professional development courses and in-services, and learn new strategies that they can implement in their classroom are also likely to have high levels of efficacy beliefs. Research also shows that efficacious teachers are more likely to take part in courses in pursuit of higher degrees. However, there is still a lot to learn about teacher efficacy and the best way to promote it in teachers. Although the research in the area of teacher efficacy is vast, there are still many areas in need of clarification including the use and types of measures of teacher efficacy.

Areas in Need of Clarification

An area in need of clarification in the area of teacher efficacy is the label and definition of teacher efficacy. Throughout the literature on this topic one will find "teacher efficacy" referred to by a variety of terms, for example: teacher self-efficacy, teacher efficacy, or personal teaching efficacy. Although these terms differ, the meaning behind them seems to be the same. For example, in their study, Gibson and Dembo (1984) referred to "teacher efficacy" as a belief in a teacher's individual abilities to teach students. Deforest and Hughes (1992) researched the constructs of "teacher self-efficacy" and "personal teaching efficacy" in their study. Sparks (1988) used the term "teachers' self-efficacy" and described it as a teacher's confidence in his or her ability to handle situations in the classroom. Caprara et al. (2003) discussed the implications of "teachers' perceived self-efficacy" beliefs with regard to collective efficacy within schools.

Although all of the terminology differs, the way in which the authors researched, measured, and discussed these terms is similar. Likewise, these authors cite either Bandura or Ashton as the source of their definition. Most of the studies also used the Gibson and Dembo (1984) TES as a means of measuring the constructs. It seems as though the definition of the construct is in agreement, but the specific terminology is not. Thus, researchers should agree upon a term that applies to this meaning.

Measurement of the construct of teacher efficacy has been an issue within the research for many years. Using a two-dimensional theory of teacher efficacy, Gibson and Dembo (1984) developed the Teacher Efficacy Scale (TES), which measures both personal and general teacher efficacy. Personal teacher efficacy refers to teachers' beliefs in their ability to make a difference in student learning, and general teaching efficacy entails teachers' beliefs that the educational system can teach students regardless of home environment, IQ, and school conditions. A factor analysis of Gibson and Dembo's data for this scale supports the internal validity of the scale and suggests that teachers' self-efficacy is comprised of these two dimensions. Thus, for many years it was believed that personal and general teacher efficacy influenced teachers in their ability to perform in the classroom, and the two dimensions measured by Gibson and Dembo are the most prevalent in the literature on teacher efficacy to date.

However, today the TES is not as widely accepted; as later research suggested that there were limitations in the verbiage used in the scale. Upon investigation of the scale, Woolfolk and Hoy (1990) found that most of the teacher efficacy items on the TES were stated in a negative manner (e.g., "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or

her home environment."). In contrast, personal efficacy items were stated in a positive manner (e.g. "When I really try, I can get through to the most difficult students."). This may have been problematic, as the differences in the way these questions were posed may have influenced how individuals' responded, and results of the factor analysis may have been a result of the participants who differed their responses based on item wording (Woolfolk & Hoy, 1990).

More recently, Tschannen-Moran and Woolfolk-Hoy (2001) proposed an integrated model of teacher efficacy. This model joined the previous variables of teacher efficacy with additional areas in need of expansion. Additionally, this model highlighted various aspects of teacher efficacy, such as mastery and vicarious experiences, verbal persuasion, and emotional cues. The researchers held the belief that a reliable measure of teacher efficacy had to not only test personal competence but evaluate the particular teaching contexts. Based on their 2001 data very high rates of reliability, and alpha .94, the Teacher Sense of Efficacy Scale (TSES) is now widely used and accepted in studies of teacher efficacy.

However, the TSES still has flaws. For example, it does not measure whether or not a teacher has high or low efficacy varying from one pedagogical domain to another. For instance, a teacher may feel highly capable of teaching reading but much less capable of teaching mathematics. Indeed, Goodard, Hoy, and Hoy (2000) suggested that teachers do not feel the same amount of efficacy in each teaching situation. Likewise, Deemer and Minke (1999) have stated that teachers' sense of efficacy may differ across a variety of teaching tasks. A limitation within the current literature is the absence of domain-specific teacher self-efficacy research, and there is a need to study how self-efficacy differs for

teachers depending on the subject. This is especially important for elementary school teachers who are required to teach in many subjects. There seems to be a need for the creation or adaptation of an instrument to measure how teachers feel about teaching specific skills.

The field does not yet have a measure of teacher efficacy within most specific pedagogical domains. This seems to be an oversight, as a teacher could easily feel efficacious in the teaching of mathematics or science but not feel efficacious in the area of reading. A better approach may be to make the TSES more specific. For instance, reading teachers may benefit from taking a reading specific efficacy test, as this will apply directly to their field. It seems as if we still have a way to go before the question of how to measure teacher efficacy is answered.

Furthermore, it may be beneficial to understand how efficacy within specific domains affects pre-service teachers before they even enter the career of teaching. Likewise, a specific model concerning pre-service teachers does not exist. Although the authors of the TSES identify the long version of the test as being appropriate for pre-service teachers, a test that is more specific to this population may be beneficial to that area of research.

Pre-Service Teacher Efficacy

Since a positive relationship between high teacher efficacy, teacher practices, and job satisfaction has been established, it is not surprising that researchers have examined the effects of teacher efficacy on pre-service teachers. A study by Woolfolk and Hoy (1990) found some positive effects of high efficacy beliefs for pre-service teachers. They investigated 182 pre-service teachers using a number of surveys and vignettes. Using a

combination of factor analysis and canonical correlations, they found that pre-service teachers with high efficacy were less controlling in their thoughts about dealing with students. This promoted autonomy in how these pre-service teachers reported that they would allow students to choose assignments. An example of this is a teacher assigning a book for students to read: an efficacious teacher may assign a genre and allow the students to choose the specific book, whereas a teacher with lower efficacy is more likely to assign a specific book leaving the children little or no choice. This issue of autonomy has been shown to have great influence on children's motivation to read (Guthrie, et al., 2000) in that when given a choice of which book to read children are more likely to pick a book they are interested in and this may increase their motivation to read that book.

Another study compared the efficacy beliefs of pre-service teachers and in-service teachers. Benz, Bradley, Alderman, and Flowers (1992) found that pre-service teachers had higher efficacy beliefs than in-service teachers with regard to motivating students. This is despite the fact that these pre-service teachers had never had an experience motivating a student.

Another study investigated 619 pre-service teachers and compared participants with high science efficacy to those with low science efficacy using the Enochs and Rigg's Elementary Science Teaching Efficacy Belief Instrument (Schoon & Boone, 1998). This scale was refined and contained two sections: a measure of science teaching efficacy and a measure of alternative conceptions of science. The researchers found a correlation between high efficacy scores and high knowledge scores. However, in another science specific study, Enochs, Scharmann, and Riggs (1995) found a negative correlation between personal science teaching efficacy and the number of science courses a pre-

service teacher had taken. Thus, pre-service teachers who took more coursework rated themselves lower in efficacy beliefs. Again, the findings of this study and the study by Benz et al. (1992) may lead one to question upon what pre-service teachers are basing their efficacy beliefs. One may question how a pre-service teacher with no teaching experience could have a higher belief in their ability to motivate a student than an experienced teacher? Likewise, how can a pre-service teacher with more coursework in the domain of science have lower efficacy than one with less coursework in science? With these types of research findings one may question whether or not pre-service teachers' efficacy ratings are based on realistic beliefs about their ability to teach. While the previously reviewed research on teacher efficacy is based on teacher beliefs during work as a teacher, pre-service teachers have no such experience on which to base their beliefs.

Field Experiences and Pre-Service Teacher Efficacy

One possible way to give pre-service teachers a real world experience upon which to base their efficacy beliefs is to provide them with field experiences, such as tutoring or observations. Enochs et al. (1995) believed that opportunities for real world experiences need to be provided for pre-service teachers.

In one such investigation of field experience with pre-service teachers, Parameswaran (1998) compared 60 undergraduate education major students in an educational psychology course using the TES. These college students were randomly assigned to one of two classes. Both classes were identical except that one had a field experience wherein they went on a field trip where they visited five local resource centers that worked with adolescents or children. During these visits, the participants interviewed

staff members to gain information about their theoretical orientation with regard to psychology and the difficult experiences the staff members had while making an effort to match this orientation with the youth at the center. The other class met only at the university in a classroom setting. In a comparison of the participants' pre-test and post-test scores, Parameswaran found that the field trip group had higher post-test efficacy. This suggests that the hands-on experience positively affected participant's efficacy beliefs. As a result, Parameswaran found that these pre-service teachers were more confident in their ability to deal with children from diverse backgrounds, when compared to their counterparts who did not attend the field trip.

In another investigation, Newman (1999) used the TES (Gibson & Dembo, 1984) and other additional questions measuring efficacy to compare 87 pre-service teachers enrolled in an educational psychology course. Over half of these pre-service teachers were involved in a mentoring program in which they worked in a public school for a ten week period with two students who needed help either behaviorally or academically, while the other participants had no such field experience. Newman found that both groups of pre-service teachers were more efficacious after taking a 10-week course in educational psychology than before the course. Although the field experience group had more of an opportunity to interact with students, they did not have a differing amount of gains in their pre-test and post-test efficacy beliefs compared to their counterparts who did not have the field experience. One possible reason for this may be that they were not mentoring in a specific subject or using a specific set of skills they were learning in the university course. An interesting question would be how this study would differ if the pre-service teachers were specifically working with students in mathematics or reading.

In one such domain specific investigation of pre-service teachers; Plourde (2002) examined pre-service teachers' sense of self-efficacy in teaching within the domain of science and outcome expectancy beliefs (when people expect certain behaviors to result in positive outcomes) in teaching science. Plourde examined 59 pre-service teachers' efficacy within the domain of teaching science before and after a semester of student teaching. A pre-test and post-test version of the TES adapted for examination of the specific domain of science, called the Science Teaching Efficacy Beliefs Instrument, was used for this study. In this adaptation of the TES, Plourde adjusted each question to ask about science as opposed to the original version, which asked teachers questions about their personal and general efficacy beliefs. For example, the TES question "When a student does better than usual, many times it is because I exert a little extra effort" was changed to "When a student does better than usual in science, it is often because the teacher exerted a little extra effort." Analyses showed that the participants did not grow in efficacy; however, the participants did have a lower sense of confidence that the teacher can make a difference in the area of science after student teaching. It should be noted that Plourde did not use a control group for this study, so how the experimental group would compare to another group cannot be ascertained. Thus, to determine what led to a lack of a significant change in efficacy this study should be replicated with a control group.

Educators might find the Plourde's (2002) findings surprising, as they may assume that experience leads to higher efficacy or that "practice makes perfect." One possible reason for the lack of significance in these findings is the notion that experience may take away some of the idealism with which pre-service teachers enter the classroom.

For instance, while learning pedagogical practices in a university setting, pre-service teachers may believe all lessons can and will reach all students every time. Upon experience in a real classroom setting, they learn that this may not be the case. Sometimes lessons hinge on the mood of the students. A sunny day or cold pizza in the cafeteria can affect the outcome of even the best-laid plans. Thus, being in the classroom possibly exposed these pre-service teachers to the reality that lessons are not always a success.

The findings of these studies suggest that further research is needed in the study of pre-service teachers' efficacy to determine whether pedagogical knowledge and experience within a subject is related to teachers' beliefs. For example, are pre-service teachers who have field experiences in a domain specific area, such as reading, more efficacious when compared to a control group? Do pre-service teachers who engage in domain specific field experiences have a greater understanding of domain specific pedagogical practices? Additionally, research should explore how a pre-service teachers' domain specific efficacy impacts their future elementary school students' achievement outcomes in that specific domain.

Areas in Need of Clarification in Pre-Service Teacher Efficacy

As stated earlier, there is not a specific measure to evaluate pre-service teacher populations and their efficacy. Therefore, one may question whether or not teacher efficacy and pre-service teacher efficacy can be accurately measured in the same way. Woolfolk and Hoy (1990) looked at the differences on the TES between pre-service teachers and experienced teachers and found that pre-service teachers answered the questions differently than experienced teachers. Although some differences are to be

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expected, one may question whether or not it is appropriate to test efficacy in the same manner for both groups of teachers. In addition, a method for measuring efficacy in different pedagogical domains is needed as teacher or pre-service teacher efficacy may vary from one pedagogical domain to another. Likewise, measuring both teacher efficacy and pre-service teacher efficacy in a specific domain before and after a domain specific in service or field experience would allow researchers to observe differences in how efficacy changes.

Lastly, with the limited time and increased pressure on teacher preparation programs to fulfill requirements of pre-service teachers; universities should know what best prepares their students to become competent teachers. As such, the area of how to enhance pre-service teacher efficacy is in need of clarification. If field experiences, such as those examined by Parameswaran (1998) and Plourde (2002) create more efficacious pre-service teachers, then they should be embedded within coursework; and if they do not, programs should not spend the time focusing on these opportunities.

On one hand, Plourde (2002) found that classroom experience did not have a significant effect on pre-service teachers' self-efficacy in teaching science. On the other hand, Parameswaran (1998) found that hands-on experience led to a higher sense of self-efficacy in pre-service teachers. Therefore, universities may question which practice is better and how to optimally use the short amount of training time they have with pre-service teachers. Also, I believe programs training pre-service teachers should give them the opportunity to participate in field experiences based on domain specific experiences that take place over an entire semester opposed to the short duration of a one-day session. I also believe that these domain specific experiences may be enhanced if they occur in

conjunction with instruction in domain specific content , Furthermore, interviews with pre-service teachers after their field experience could help get at the heart of what lies beneath their change in efficacy, as it may lead them to reflect on their specific experience and how it relates to their efficacy beliefs. If their answers do change, it is important to know why. Additionally, if efficacy does increase, how does this affect their pedagogical practices in the specific domain?

Enhancing pre-service teacher efficacy seems to be an area in need of more research. Understanding efficacy within specific pedagogical domains also seems to be a topic in need of additional examination. As such, the remainder of this review will focus on pre-service teachers' efficacy within the domain of reading and how field experiences, such as those examined by Plourde (2002), Parameswaran (1998), and Newman (1999), influence pre-service teacher efficacy in the teaching of reading.

Pre-service Teacher Reading Education and Tutoring

As stated earlier, No Child Left Behind has put increased requirements on teachers to improve children's academic achievement levels, especially in the area of reading (U.S. Department of Education, 2002). At the same time, however, schools are experiencing more challenges in the teaching if reading with children from diverse backgrounds, who speak languages other than English, and children live in low social economic status with limited access to books. Thus, teacher trainers should be concerned with helping teachers meet these challenges. Nevertheless, in 1998 Snow and colleagues stated that "in the typical pre-service course of study, very little time is allocated to preparing to teach reading." (1998, p. 283). Now is the time for change. As the content of teaching reading is being redefined through the use of Put Reading First (National

Institute of Child Health and Human Development, 2001), educators have a clearer idea of how to teach pre-service teachers the pedagogical practices of reading. With the knowledge that there are benefits to having teachers in the classroom with higher efficacy beliefs (Allinder, 1995), the goal of teacher trainers should be to help pre-service teachers understand how to teach reading while also helping them feel efficacious about their ability to teach this skill. The literature on pre-service teachers' efficacy has shown efficacy beliefs can be related to field experiences (Newman, 1999; Parameswaran, 1998; Plourde, 2002), and this research examines the benefits of one specific field experience, one-on-one tutoring, as a means of changing pre-service teacher efficacy while also improving content knowledge.

"If literacy is personal, functional, and enjoyable, the young child will simultaneously learn what written language is, how it works, and how to use it for many purposes" (Fountas & Pinell, 1996, p. 11). One way to achieve this ideal is for the teachers to know the individual children within their classroom and what reading means to them personally, what function they believe reading serves in their lives and what aspects of reading are enjoyable or not enjoyable. Dewey (1915) stated that learning should be child centered, and educators should take hold of the child's activities and give them direction. Likewise, Dewey argued that children should not be regarded as a mass but instead as individuals.

These ideas can be extended to that of pre-service teachers participating in field-experiences, such as one-on-one tutoring, as this experience may give them insight into their future students as individuals while helping those children with their individual needs. Furthermore, if this field experience is domain specific, it may also help the pre-

service teachers hone in on specific practices they are learning in their university courses. As it can be difficult to teach pre-service teachers pedagogical skills in a university classroom setting alone, it could prove useful to have these tutors work with a tutee while linking theories to practice in a specific domain. Thus, individual time with an elementary student, such as tutoring provides, could be a beneficial part of quality training for future reading teachers.

Rogoff's (1990) "guided participation" suggests that both guidance and participation in culturally valued activities, such as reading, are important to children's apprenticeship in learning. In addition, Vygotsky (1986) believed that every child is able to accomplish more with assistance. Thus, individual time with each child is likely to allow time for scaffolding from a more knowledgeable other. According to Morris (2005), the average elementary school teacher to student ratio in the United States is 1:24. When one considers the mandated 90-minute literacy block in Reading First Schools, very little time is available for individual instruction for each student. Thus teachers do not have a lot of time to hone in on a student's specific difficulties, interests, and needed instruction, but these tutors may.

In general, it is a belief that field experiences, like tutoring, are likely to influence pre-service teacher efficacy, as tutoring will give pre-service teachers a hand-on experience in teaching. Moreover, I believe this tutoring experience should be domain specific. As such, this section of the chapter focuses on tutoring elementary students in reading and how this may or may not be beneficial to pre-service teacher training. To begin, an overview of reading education and pre-service teacher reading education will outline the basic skills that teachers need to understand and use while teaching children to

read. I have focused on the five building blocks presented in Put Reading First (National Institute of Child Health and Human Development, 2001), as the basis for teaching reading. It should be noted that these "building blocks" have been scientifically proven to aid in the teaching of reading. In addition, these building blocks make up the foundation for Reading First, the federal reading initiative that resulted from the No Child Left Behind Act (U.S. Department of Education, Office of Elementary and Secondary Education, 2002). As part of Reading First, higher education institutes are now required to teach pre-service teachers these five building blocks.

As teacher education majors are now taught more about the foundations of teaching reading based on the Put Reading First (National Institute of Child Health and Human Development, 2001), the second part of this chapter focuses on studies about reading methods courses that employ field experiences. These experiences have been found to aid tutors in understanding the importance of teaching to the individual student (Linek, et al., 1999; Smith& Hill, 1999). Additionally, tutoring has been found to aid in pre-service teachers' understanding of theories learned in the university classroom, as they are able to put theory into practice while working with a tutee (Fang and Ashley, 2004; Massey, 2002; Niertstheimer, Hopkins, Dillon, and Schmitt, 2000).

The third section of this chapter reviews the literature on pre-service teachers' reflections about a tutoring field experience and reveals that reflection is another important aspect of tutoring that supports pre-service teachers' growth and understanding of theory (Wolf, Carey, Mieras, 1996; Worthy and Patterson, 2001). Finally, limitations of the reviewed literature and suggestions for future research are discussed.

The Five Building Blocks of Reading First

As the substantial importance of how to teach reading continues to lead researchers in their studies the National Reading Panel (NRP) published Put Reading First (National Institute of Child Health and Human Development, 2001), a report for teachers outlining the steps in teaching reading. The report summarized scientifically based research findings for how to teach reading. In Put Reading First, the NRP highlighted what they called the five "building blocks" of teaching reading: phonemic awareness, phonics, fluency, vocabulary, and text comprehension. The NRP found that studies showed these five building blocks of skills were key in teaching children how to read and these skills are now taught in many higher-education courses designed for teacher training.

The first of these building blocks, phonemic awareness, is one type of phonological awareness. Most research finds a common link between reading acquisition and phonological awareness. As defined by Snow et al. (1998), phonological awareness is the capability to attend to sounds of language as separate from meaning; whereas, phonemic awareness is based specifically on the understanding of sounds or phonemes used in language (National Reading Panel, 2000). By understanding the sounds that make up a word, children are better able to understand how to begin to read, as they are more capable of mapping a language sound to the corresponding letter. For instance, a child who is able to identify words that begin with the sound /t/ will have an easier time when reading the word "truck" and understanding that "truck" begins with /t/.

The second of these building blocks, phonics instruction, is the teaching of the relationship between sounds and letters. Although this has been a hot button issue in the world of reading, the NRP found phonics to be extremely important in teaching reading. The panel advocates for direct phonics instruction beginning in the 1st-grade. This systematic instruction involves the explicit teaching of the relationship between sounds and letters, which create words. For instance, if a child is taught how to blend the sounds of /a/ and /t/ into /at/, as in "cat" or "pat", the student will be able to unlock the door to many written words using this skill.

The third reading building block is fluency. Fluency is a child's capacity to read text accurately and rapidly (National Institute of Child Health and Human Development, 2001). Readers are fluent when they are able to read without decoding text on a word to word basis. In addition, fluency is shown by a reader's ability to use expression, correct intonations, and cadence while reading. A fluent reader will be able to read with the flow quickly and effortlessly. Fluency can be an especially enjoyable skill to teach, as teachers can use creative practices to design lessons that allow students to exhibit fluency through plays, choral readings, poetry, and songs.

The fourth building block, vocabulary instruction, is the knowledge of oral and printed words. By knowing words through print or oral communication, students will be better able to understand what they are reading. Vocabulary can be learned through conversation, read-alouds, and reading independently. Students should also learn vocabulary building skills through the use of dictionaries, context clues, and pictures.

The final building block is text comprehension. Text comprehension skills enable the reader to understand the meaning of what they are reading, and the NRP (2000) views

the other building blocks as prerequisite skills that are necessary but not sufficient for text comprehension. Clearly, text comprehension is important to the reader, as the purpose of reading is to extract information from the text. Whether students are reading to enjoy a story or discover how to plant a garden, it is important they understand what the words, sentences, and overall text means. Teachers can monitor the reader's understanding of the text by questioning, or having students make connections, predict, and summarize what was read. Furthermore, elementary school students can use the same strategies in a metacognitive fashion, wherein they think about what they are reading while self-monitoring their understanding of the text.

One of the goals of Reading First is to have university teacher training programs instruct pre-service teachers on the complexity of these five building blocks. However, one may question if simple instruction in these building blocks is enough. Indeed, one of the main questions of this chapter is what can teacher training programs do to enhance pre-service teachers' understanding of these concepts? How can we get pre-service teachers to understand these building blocks conceptually and how they function in the actual practice of teaching reading? One possible way to do this is by allowing pre-service teachers the opportunity to put theory into practice through field experiences, such as tutoring.

Additionally, volunteer tutors bring expertise and human resources embedded in communities, schools, and universities (Johnston, Invernizzi, & Juel, 1998). Thus, an examination of pre-service teachers as reading tutors and the effort such an experience will have on them is in order.

Pre-Service Teachers and the Importance of Field Experiences

Field experiences are important to teachers and students alike. Rogoff (1990) suggested that reading would not be achievable without human efforts or without individuals who model reading to help others learn how to read. Morris (2005) believed one way to have reading modeled for children was through tutors in the elementary classroom where the opportunity to learn to read is of consequence. Although one-on-one tutoring is effective, an obstacle to providing students with such a tutoring experience can be the expense (Wasik & Slavin, 1993). Invernizzi and colleagues (1997) highlighted the idea that using volunteer tutors in our schools is a feasible way to provide elementary students with an economical, one-on-one intervention.

Thus, the ideas put forth by this research, having teacher education programs that require pre-service teachers to tutor in local public schools, could simultaneously give school children the one-on-one attention needed for additional reading support and allow pre-service teachers experience in teaching reading. In addition, a tutoring program may promote knowledge and skills in the pre-service teachers that could not be attained in the university classroom setting alone. Giving pre-service teachers the opportunity to tutor may require them to link the reading theory that they are learning in the classroom and to apply it in a real world setting. It is possible that reading teachers in training who were given the opportunity to engage in a one-on-one experience teaching an elementary student reading skills may have an easier time when required to apply this knowledge in their own classroom. Tutoring can provide this hand-on experience that could allow for the transfer of theory to practice.

Likewise, research has found that many teachers are likely to gravitate toward teaching in the same manner in which they themselves were taught (Kagan, 1992). Having pre-service teachers tutor would not only provide a local school child with individual instruction, but it would also give the pre-service teacher an opportunity to add to their repertoire of experiences by learning how to teach to the individual needs of a student. Kagan also stated that these experiences are important because in order to obtain knowledge of students as individuals a hands-on experience in the field is essential. Furthermore, such experiences with a student may help to alter the pre-service teachers' original beliefs about teaching in the manner they were taught. This experience is valuable, since many of the pedagogical practices that were employed years ago may no longer be used, as other strategies have been found to be more effective.

In an effort to produce findings regarding excellence in reading teacher preparation, the International Reading Association (IRA) administered a survey to 1,598 IRA members who were reading teacher educators. This survey was intended to relay improvements in current programs, provide grounds for resources to implement changes, and create a database that could be used to institutionalize the development of programs (Hoffman & Roller, 2001). The 949 survey respondents came from various institutions and were categorized as highly qualified faculty. When asked how important field experiences were prior to student teaching, participants responded that their importance and their programs' provisions for field experiences were highly valued. However, how field experiences affected the teachers once they were actually in the classroom teaching was not examined in this survey.

A 2003 study by Maloch, Flint, Seely, and Eldridge did examine how field experiences affected teacher practices. Maloch et al. followed 101 pre-service teachers through their first year of teaching and examined the impact three different types of reading preparation programs had on participants' understandings, beliefs, and reported decision making. The study examined participants from three different types of university teacher education programs. The first group went to a university that offered a reading specialization program (RSP) that required the students to take 15 credit hours in reading and language arts and spend 150 hours in classrooms prior to students teaching, which included some one-on-one time with a student. The second group attended a university that offered a general education program (GEP), wherein all students attended the same courses. These courses included a maximum of six credit hours of reading coursework and 50 to 100 classroom hours that were reported not to align well with the curriculum. The third group completed their education at a university that offered a reading embedded program (REP). This program required six hours of reading coursework, reading instruction embedded in other areas of coursework, and 150 hours in an actual classroom before student teaching. Thus, the 1st and 3rd programs offered a greater number of hours in field experiences and additional hours of reading education.

Using three structured interviews, Maloch et al. (2003) examined what these teachers understood, believed, and how they reflected upon their university program and pedagogical practices. Through a thematic analysis, the researchers explored patterns and found that reading preparation time in the classroom positively affected the first year teachers' understanding and perceptions of the pedagogical practices of reading. For example, the teachers in the REP and RSP groups were more likely to report basing

instruction on individual student's needs and working within and around the curriculum to best meet those needs. This finding suggests that teacher preparation courses that are rich in apprenticeships, purposeful coursework, and experiences focusing on reading produce higher quality teaching in the first year.

These findings support the notion that pre-service teachers who are exposed to more time in field experiences and take additional reading courses are more likely to have a higher ability to respond to individual student's needs. This study is especially important in the field of pre-service reading teacher education, as the researchers looked at both of the programs of study required in reading by different universities and followed the teachers into their first year of teaching. The approach taken in this study is novel because it enters a new realm of understanding as far as the transference of pedagogical knowledge learned at the university to the pedagogical practices implemented in the classroom is concerned.

In fact, Duffy and Atkinson (2001) found that pre-service teachers enrolled in a reading methods course believed the experience of tutoring a struggling reader was one of the most valuable experiences in their course with regard to their preparation to teach future students. Similarly, Linek et al. (1999) found pre-service teachers in a tutoring group cited their tutoring as having the most influence in their belief changes. They felt they were able to practice the various reading strategies they had learned at the university, while those who did not participate in the tutoring felt they needed an opportunity to test their beliefs in a real world situation. As tutoring is a field experience that provides a one-on-one experience, it seems that pre-service teachers may grow in

their understanding of teaching reading and may put the theories they are learning into action when working with tutees.

Pre-Service Reading Tutors' Growth

 Other research has supported the findings of Maloch et al. (2003) that showed that pre-service teachers who have had the opportunity to work hands-on with students shift their beliefs from a simple teacher centered view of teaching reading to a student centered view of teaching reading (Linek et al., 1999; Smith & Hill, 1999). This finding is important, as teachers who are able to expand their views of teaching to students may be more likely to meet individual student's needs. For example, if a teacher is teaching a struggling reader the alphabet, by using a more student centered approach the teacher is more likely to have the ability to recognize the student's area of needs, use a variety of instructional practices suited to meet those needs, and keep the interests of the child in mind. In addition to recognizing student's individual needs, pre-service teachers have also shown growth in understanding theory by putting it into practice as tutors. These two themes of growth (students as individuals and linking theory and practice) have been recurring in the literature on pre-service teachers as reading tutors and will each be discussed in turn.

In regards to understanding students as individuals, Worthy and Prater (1998) investigated the role a tutoring project played in the participants' views of teaching reading. A group of pre-service teachers enrolled in a university reading methods course were assigned to tutor a student in an after school literacy program called the "Reading Club" for one hour twice a week. The "Reading Club" was an after school program wherein pre-service teachers tutored a child in literacy. In addition to this tutoring, the

pre-service teachers were involved in an internship during the day at the adjoining school where the tutees attended. The data for this research consisted primarily of tutor surveys, interviews with tutors, and journal reflections written by the tutors. Results revealed that pre-service teachers valued what they learned in class. However, they believed that the opportunity to put the theory into practice allowed them to develop a confidence in teaching reading they would otherwise not have had. Moreover, Worthy and Prater found that their pre-service teacher participants expressed an understanding of the importance of treating students as individuals with differing needs.

Likewise, Nierstheimer and colleagues (2000) examined 67 pre-service teachers in a reading methods course which utilized aspects of a Reading Recovery program model that incorporated the opportunity for an observation into the tutoring experience. In this exercise pre-service teacher participants were instructed on how to observe a peer while that peer was tutoring. Each tutor was responsible for working with one student for 75 minutes a week for 12 weeks at the university reading clinic. This time allotment gave the participants the opportunity, if they chose, to observe a peer tutoring a child once a week for five weeks. Additionally, the participants completed various assignments throughout the course. The numerous forms of data included questionnaires, videotapes, written responses, and interviews.

Analysis of the data revealed a key theme: the pre-service teachers who participated in this course experienced a shift in their beliefs about teaching as they began to accept more responsibility for helping elementary students with reading difficulties. Thus, at the beginning of the course the pre-service teachers were apt to believe that the job of teaching a struggling reader was the responsibility of somebody other than the

teacher. However, after the tutoring experience, these same pre-service teachers believed the teacher had the responsibility to use various instructional strategies to address the individual child's needs. This finding is valuable, as teachers who recognize it is their responsibility to help a struggling reader may be more likely to attempt to do so instead of passing the problem on to another.

Fang and Ashley (2004) also showed that being able to put theory into practice helped pre-service teachers develop an understanding of course material and the student as an individual. In this study, 28 pre-service teachers enrolled in reading courses were required to participate in a "reading block" wherein pre-service teachers tutored struggling students in the area of reading. This tutoring was integrated into three of the students' reading methods courses. In this project, unlike the others, two tutors were assigned to one tutee. Each tutor took turns tutoring the student for 45 minutes once a week, while the other observed the session. After the tutoring, the pre-service teachers remained at the school to reflect upon and discuss the session with others in the class. Before these group discussions, the paired tutors would debrief with one another about their tutee. This form of tutoring is innovative, as it allowed the pre-service teachers to have a colleague with whom they shared ideas, as both were equally knowledgeable about the tutee in question.

Data analysis of surveys, journals, and interviews divulged that tutors' confidence, or self-efficacy, as reading teachers and their ability to teach reading grew. Additionally, the participants felt that one of the most valuable aspects of the course was the tutoring, as they were able to use what they had learned in class while training to become a reading teacher. Pre-service teachers' knowledge base also grew, and they were

better able to identify why some students struggle when reading and how to help those students. At the end of the project, pre-service teachers reported that they believed instruction must be individualized to each student. Thus, this type of tutoring affected pre-service teacher efficacy, ability to recognize reading problems, and beliefs that instruction should meet the individual needs of the student.

In all, these studies show that tutoring was a positive experience for pre-service teachers, as they fostered an understanding of the reader as an individual and allowed for a bridge between theory and practice. Tutoring allowed these teachers in training to gain experience, while having the knowledge and support of their university instructors. Furthermore, the pre-service teachers had the opportunity to use the strategies they learned in the classroom while tutoring an elementary student in a one-on-one experience. Tutoring was found to be of value, as it allowed pre-service teachers to gain a better understanding of how to implement the theoretical perspectives in the classroom, which they learned about in their reading methods courses. Further, tutoring seemed to encourage pre-service teachers to shift their beliefs from teacher centered to student centered, wherein they were more likely to work to meet the needs of their individual tutee and future students within their classrooms. In addition to merely tutoring, Fang and Ashley (2004) found that time to reflect upon the tutoring experiences was important to the tutors they worked with. This theme is carried through the literature, as well.

Pre-Service Reading Tutors' Reflections

Worthy and Patterson (2001, p.306) stated, "critical reflection should help learners to move forward both in their thinking and practice." This suggested that those training to be teachers may be able to gain experience and insight into the teaching of

reading not only though tutoring, as discussed above, but through the act of reflecting on their tutoring experience. For example, in a study by Worthy and Prater (1998) reflections were done in the form of journaling, wherein the tutors recalled their experiences tutoring a child in reading by writing about the lessons they taught. Based on their reflections, the researchers found the experience of working one-on-one with a student positively influenced participants' self-confidence as teachers and content and procedural knowledge.

In one study employing the use of tutoring and reflection, Hedrick, McGee, and Mittag (2000) examined the perceptions of pre-service teachers who tutored elementary school students for an entire semester. In this study, the pre-service teachers were assigned a student at-risk in the area of reading. The main goal of the study was to follow the emerging perceptions of the pre-service teachers. As such, they utilized e-mail as a source of communication. E-mail allowed the researchers to observe the tutor's ideas as they were taking place, and it served as a convenient mode of communication. Surveys were sent through e-mail, and pre-service teachers were able to seek advice from their professors regarding situations and questions that confounded them in their teaching.

A qualitative analysis of the data revealed the hands-on experience helped the pre-service teachers to be reflective and analytical about teaching situations. For example, pre-service teachers reflected on the instructional practices they used to assess and teach to individual student's needs. These teachers also wrote about emotional attachments they created with their students. Through the close experience of a dyad, the pre-service teachers learned instructional strategies and were able to understand children as individuals in terms of their needs and interests. It was the hope of the researchers that

this understanding would transfer when the teacher had a classroom of his own; however, this was not examined. Finally, Hedrick et al.'s (2000) pre-service teacher participants were able to emphasize and strengthen what was previously learned in the classroom, create questions that could define future learning, experience non-academic issues they may encounter in the classroom, and view the fact that lessons need to be adjusted to the needs of individual children.

Likewise, Worthy and Patterson (2001) used email to examine the written reflections of 71 pre-service teachers who were enrolled in a reading education course and tutored elementary school children during a one-year teacher preparation program. This study differs from those that allowed the participants to write freely in a journal or on email, as the researcher posed questions participants were required to answer. For example, the question presented in the middle of the semester was "How are things going for you and your student in the reading club? Include positives and negatives." Unlike other studies, these authors found that as time passed, journal entries began to reflect a shift from concerns about teaching to meeting the individual needs of their students and modifying behavioral issues. Tutors showed additional growth in their abilities to individualize instruction for their students after learning about their students' needs and interests. Interestingly, more than half of the tutors reflected a belief that the connections they made between theory and practice were the most valuable aspect of tutoring. Thus, these students not only gained knowledge of how to teach individual students better, but they also felt that the experience helped them connect the content they learned in the university classroom to a real world situation.

In another study that did not implement the use of free response journaling, Wolf and colleagues (1996) examined field notes of 43 elementary education majors who tutored elementary school students in reading once a week for half an hour. The tutoring sessions took place for an average of eight weeks. After tutoring, the pre-service teachers were required to take an hour and write field notes that included books and activities the tutor and tutee read. Likewise, questions and answers about the readings were included in the notes, as the researchers were also interested in the children's literary responses and the tutors' reactions to those responses. By coding and analyzing the field notes and an end of the semester paper, Wolf found that pre-service teachers grew in their understanding of the tutee's response to literature (literary response) and theory. One reason cited for this growth was the day to day reflections of the children the participants worked with who provided them with a hands-on experience that could be linked to theory learned in the university classroom. One limitation of this study was the lack of a "free response" journal. By guiding the participants' responses, it is unclear as to whether or not the tutors were allowed to express all they learned through the project. It seems that the data may be richer if tutors were allotted time to write personal reflections on a more frequent basis. Perhaps those reflections would expose findings not presented here; however, this study is still a good example of how pre-service teachers benefited from linking theory to practice.

An additional study which examined reflection and pre-service reading tutors was based on the notion that improving the quality of teachers can be done through improved teacher preparation (Rushton, 2003). Rushton selected two pre-service graduate students completing a year internship in an inner-city elementary school to use as participants.

These two participants completed four interviews and weekly reflection papers for the first half of the school year and participated in taped discussions with the rest of their student teaching cohort (N=17). Rushton attempted to gain an in-depth understanding of these teachers' perceptions of their experiences. Data analysis revealed that the two participants had initial feelings of dissonance but had a positive shift in their teaching after their reflective discussions with others in the cohort. Thus, these pre-service teachers' growth through reflection and discussion may have allowed them to be more comfortable as teachers. Despite the depth that Rushton was able to go into with these two teachers, this small number of participants is a limitation of the study. As such, the range of experience was very limited to these two teachers' teaching situations. Thus, these findings are not necessarily generalizable to all teachers in all inner city schools or non-inner city schools.

In all, the main themes that emerged in the pre-service reading teacher education literature revolved around the notion that tutoring and reflection about tutoring can help pre-service teachers. Pre-service teachers who tutored were found to have shifts in their understanding of teaching, wherein they understood each child had individual needs. Additionally, pre-service teachers who tutored had an opportunity to put theory learned in the university setting into practice, and this provided them with a better understanding of the theories they learned. In addition to the tutoring experiences, pre-service reading teachers needed time to reflect upon their experiences. This is often an area that is overlooked for the sake of time and energy. Although it is easy to forget, when pre-service teachers are allotted time to journal or discuss the interactions they have with their tutee, it allows them to better understand the needs and strengths of those

elementary students. Furthermore, it may also supply them with a perspective or insight into the strategies they use to teach reading. Although taking the time to reflect may be time consuming, it seems to be advantageous.

As the aforementioned studies confirm, pre-service teachers who were tutors illustrated growth through their reflections. These reflections demonstrated that the tutors were able to link theory to practice while working with elementary students on a one-on-one basis. By taking the time to reflect, the pre-service teachers also reported shifting their teaching practices to meet the individual needs of their students. Although the studies do not look specifically at efficacy beliefs, one may question whether or not tutoring experiences may influence the efficacy of the pre-service teacher. All of these findings are beneficial in understanding how to better educate pre-service teachers in teaching reading, however; these studies are not without limitations.

Areas in Need of Further Clarification in Pre-Service Reading Teacher Education

The literature to date on pre-service teachers as reading tutors is a good start to learning how to improve teacher training programs, but there are limitations. First, the majority of these studies did not employ a control group. Without the ability to compare these tutoring participants with other pre-service teachers taking the same course but not tutoring, there is doubt as to whether or not it is actually the tutoring that helped shift pre-service teachers' beliefs. Although it is conceivable that much of the pre-service teachers' belief changes and growth in understanding of material in a reading methods course is mostly or partly the outcome of tutoring a child, it is not certain that this growth would not have occurred without the tutoring.

For instance, many other factors in the pre-service teachers' educational lives could account for this growth, including class readings, discussion, lecture, or semester experiences. In fact, in one of the few studies that did employ a control group the authors reported that pre-service teachers in a reading methods course who did and did not participate in a field experience both reported a teacher centered to student centered shift in their beliefs about teaching reading (Linek et al., 1999). Additionally, both groups gained a conceptual understanding about learning and teaching literacy and the process of reading. Therefore, one may question whether or not the pre-service teachers in this study actually benefited from the real world experience. As such, I employed the use of a control group in my research, wherein participants were enrolled in a reading content course. Half of the participants engaged in a tutoring project and the other half engaged in an observation project to serve as a control. This allowed for a more in depth investigation as to what resulted in changes seen.

Another arguable limitation in this area of research is the lack of quantitative research. Although qualitative research is beneficial, one may question whether or not there is a way to quantify this information, especially in the multi-method world in which we live. For example, counting the number of appropriate strategies a tutor records using with a tutee may assist the researcher in grasping whether or not the growth that is discussed in meeting individual needs is actually occurring. This numerical analysis of strategies used by the tutors would be beneficial to the researcher to view whether or not pre-service teachers who report that they are becoming more "student centered" in their teaching are actually altering their instructional practices to their understanding of the tutee's reported needs and interests. This could be quantified through the use of inter-

rater reliability, which would help ensure consistency when forming results based on journals.

Conclusion

With the increasing demands on teachers within the classroom and the No Child Left Behind legislation guiding schools, there is a need to create teacher education programs that enhance teachers' efficacy and increase the ability to teach reading to individual students. This chapter has presented evidence that suggests that teachers' personal self-efficacy about their ability to motivate students and encourage learning affects the type of classroom atmosphere they create and the level of student achievement (Bandura, 1993). Teachers with high efficacy have been found to persist longer in their efforts to teach, provide a greater academic focus in the classroom, and exhibit different types of feedback (Woolfolk & Hoy, 1990). In addition, these teachers better serve the needs of special education students by having lower referral rates (Meijer & Foster, 1988), and teacher efficacy has been shown to be one of the main determinants of job satisfaction for teachers (Caprara et al., 2003). Research has also shown that teacher efficacy can be increased through in-service training (Fritz et al., 2001). However, field experiences have been found to have varying effects on pre-service teachers' efficacy (Newman, 1999; Parameswaran, 1998; Plourde, 2002). In contrast, pre-service reading teachers who were exposed to more time in field experiences, such as tutoring, were more likely to have a higher ability to respond to individual student needs (Maloch et al., 2003, Worthy & Prater, 1998) and put theory they were learning at their university into practice (Fang & Ashley, 2004).

A lack of domain specific research may be one reason for the inconsistent findings in previous research with regard to how tutoring impacts efficacy. As such, in this study I explored whether or not a reading specific field experience, tutoring or observation, impacted pre-service teachers' efficacy and content knowledge within the specific domain of reading. Also, I examined how efficacy impacted tutors' use of reading strategies and how reading efficacy and reading content knowledge were correlated.

Chapter 3: Methods

This research was intended to examine changes in pre-service teacher efficacy, specifically in the pedagogical domain of reading, brought about through a field experience integrated into a teacher training course. In this research I measured whether changes in pre-service teacher efficacy were related to different types of reading field experiences: tutoring or observation. In addition, I investigated whether increased teacher efficacy in reading was related to increased pedagogical knowledge in reading. The overall questions and hypotheses guiding this research were:

1. Are there differences in the amount of change in reading teacher efficacy beliefs and pedagogical knowledge in reading related to different reading field experiences, tutoring or observations? I hypothesized that pre-service teachers who tutored one-on-one would demonstrate greater change in their reading teacher efficacy than pre-service teachers who observed students during reading instruction.

2. Do pre-service teachers who have higher reported efficacy beliefs use more strategies while teaching? I hypothesized that the pre-service teachers who participated in the tutoring experience and report pre-test efficacy beliefs in the top 25% for this group would be more likely to report the execution of more reading strategies in their diaries compared to their peers with pre-test efficacy beliefs in the bottom 25%.

3. Is there a relationship between efficacy beliefs and pedagogical knowledge? I hypothesized that a positive relationship would be found between pre-service

teachers' efficacy and pedagogical knowledge for both the observation and tutoring groups.

4. Do pre-service teachers perceive the field experience as having an influence on their change in efficacy beliefs and course content knowledge? I hypothesized that participants who both tutored and observed would report that the field experience was pertinent to changes in their efficacy and content knowledge.

Participants

The participants in this study included 86 university students enrolled in a language development and reading acquisition course at a large, Mid-Atlantic University. This course is a requirement for Early Childhood and Elementary Education certification in the state. As such, the majority of participants were education majors. In addition, students take this course prior to student teaching; therefore, almost all of the participants were pre-service teachers as defined by this research. Participants received extra credit toward their course grade in exchange for their participation in the study. Students in the course were not obligated to participate in the study; however, they were required by their instructor to engage in a field experience.

Thus, participation in a field experience was a required part of this instructor's language development and reading acquisition course. Students in this class who agreed to participate in this research were asked to complete a survey of their efficacy beliefs and allow the researcher to use their Content Knowledge Assessments and structured diaries as data for this research.

In addition to the 86 participants who participated in the field experiences, a group of 21 university students also completed the adapted version of the Tschannen-Moran and Woolfolk-Hoy (2001) Teacher Sense of Efficacy Scale (TSES) specific to the teaching of reading, or the Reading Teacher Sense of Efficacy Scale (RTSES) for the purpose of factor analysis. This group of students was also enrolled in the same language development and reading acquisition course. However, they did not participate in a field experience, as they were enrolled in a section of the course with a different instructor who did not require such field experiences. Therefore, these 21 students only completed the pre-test and post-test of the adapted RTSES, and I will only report on them with regard to the factor analysis. To clarify, the 86 participants who completed the field experience will be refereed to as participants and the 21 students who completed the factor analysis will be refereed to as the additional factor analysis group.

Measures

The participants in this study completed a number of measures, which included: a demographic questionnaire, an adapted version of the Tschannen-Moran and Woolfolk-Hoy (2001) Teacher Sense of Efficacy Scale (TSES) known as the Reading Teacher Sense of Efficacy Scale (RTSES), and a Content Knowledge Assessment. In addition, all participants were asked to complete structured diaries after every field experience session, and a random sampling of participants were interviewed at the end of the semester. Each of these measures is explained in the following sections.

Demographic information

All 86 participants in this study were asked to provide demographic information to aid in the examination of the representation of the sample. See Appendix A for a copy

of this questionnaire. This questionnaire was used to gather information on participants' age, gender, ethnicity, and descriptions of previous experience working with children.

Reading Teacher Sense of Efficacy Scale

Participants were also asked to complete an adapted version of the Tschannen-Moran and Woolfolk-Hoy (2001) Teacher Sense of Efficacy Scale (TSES). The original version of the TSES contained 24 questions examining three areas of general teacher efficacy: classroom management, student engagement, and instructional practices. This measure has been shown to have high rates of overall reliability (Alpha = .88) and it has been used and accepted in studies of teacher efficacy. However, this measure was not designed to measure domain specific teacher efficacy.

As participants in this research were enrolled in the class to learn specifically about children's reading skills, and this research was interested in examining teacher efficacy beliefs within the specific domain of reading; this measure was adapted to examine teacher efficacy within this specific domain. The 16 original TSES items examining teacher efficacy in engagement and instructional practices were revised and adapted under the advisement of a psychometrician and based on the standards set forth by Crocker and Algina (1986).

To begin revisions of this measure, the classroom management subscale was omitted because this aspect of teacher efficacy does not directly impact the pedagogy of reading like engagement or instruction. The instruction and engagement efficacy questions were then adapted to be reading specific by changing key words in the questions. To assess the effectiveness of this change, a pilot study and focus group were conducted to evaluate how the adapted questions fit together with the rest of the survey.

Upon completion of the pilot studies and under the recommendation of a psychometrician, all of the original engagement and instruction questions were adapted to be domain specific. For example, the question "How much can you do to motivate students who show low interest in school work?" was changed to "How much can you do to motivate students who show low interest in reading?"

Thus, each participant in this study completed this new, reading specific, 16-item version of the teaching efficacy scale at both the beginning and end of the school semester, prior to and following the field experience. Responses to each question remained on a nine-point Likert scale as used in the original TSES and measured "how much can you do" from "nothing" to a "great deal." Therefore, there was a total of 144 points available on the RTSES. The RTSES is presented in Appendix B.

Content Knowledge Assessment

At the beginning and end of the semester, participants were also asked to complete a course Content Knowledge Assessment. This assessment was based on general and pedagogical knowledge that reflected the university objectives for the course. The assessment consisted of 27 multiple-choice items, 15 true or false items, and 7 short answer items. The assessment items were based on the course content and the National Reading Panel (NRP) publication Put Reading First (National Institute of Child Health and Human Development, 2001), which outlined the basic steps in teaching reading. Many of the questions revolved around the five "building blocks" found in scientific studies that aid in the teaching of reading: phonemic awareness, phonics, fluency, vocabulary, and text comprehension. The NRP found scientific studies that supported the notion that all of these skills are important components for teaching children how to read.

The questions in this Content Knowledge Assessment were previously used in tests administered by the instructor over a period of five years. Analysis of the questions by the instructor showed that most of the items were moderately difficult and that the range of items was representative of the course content and objectives. In addition, the course had recently been reconstructed according to the State Department of Education Reading First requirements for higher education institutions. Thus, the five building blocks of reading were essential components of the course content. Refer to Appendix C for a copy of the Content Knowledge Assessment.

Structured diaries

All 86 participants completed structured diaries after every field experience session. The format of the structured diaries used in this study was organized after an in-depth examination of three diaries written by students from past classes involved in the same field experience project. Since these diaries did not have a format, participants were able to freely describe their experiences and feelings about their encounters while working in the field experience. I analyzed these diaries by reading through each one, taking notes, and finding common themes shared throughout the diaries. For example, most of these participants reported the use of strategies in their diaries. However, it should be noted that the term strategy was not used in the theoretical sense, but was used to indicate instructional practices used to meet an individual elementary school student's needs. Thus, for this research I have maintained this definition of the term strategies. Such strategies are just one example of a theme that was used to organize the structured diaries used in this project. Through my examination of these previously written journal I was able to create a more structured diary for use in this study

The format of the diaries consisted of four questions for each of the days' activities. The questions asked all participants about the session's reading activities and strategies used during these activities. The participants were given the option to complete the same format a second time if they completed or observed two activities; however, if they only completed or observed one activity, this was sufficient. These diaries were used to tabulate the total number of strategies, or instructional practices, used by tutors or observed. Refer to Appendix D for a copy of the structured diaries.

In all, participants in this study engaged in 10 field experience sessions over the course of the semester. The participants were asked to take approximately 10 minutes on the day of each field experience session to write about their experience and reflect upon what they did and what they learned and they were asked to do this using the structured diaries. Having participants complete the diary entry on the day of the session was intended to help ensure that their memories were fresh and accurate.

Interviews

A random sample of participants from the two field experiences, tutors (N=9) and observers (N=7), were interviewed at the completion of the course. During the interviews, participants were shown both their pre-test and post-test RTSES and Content Knowledge Assessment scores. Then, participants were asked which aspect of the course contributed the most to any change noted in reported efficacy beliefs and content knowledge. Next, participants were asked whether or not they would recommend the field experience portion of their class be maintained for future classes. Finally, participants were asked whether or not their participation in the field experience was

pertinent to any change found in their efficacy beliefs and content knowledge. See

Appendix E for the complete list of interview questions.

Procedures

All participants in this project were enrolled in a language development and

reading acquisition class at a large, Mid-Atlantic university. This is a course that focuses

on young children's language development and the relationship between language and

reading acquisition. In this course students learned: concepts essential to language

development; language achievement appropriates at various ages; concepts of emergent

literacy; models of reading acquisition and skilled reading; and major components of

reading such as phonemic awareness, fluency, vocabulary, and reading comprehension.

This course is required for Early Childhood and Elementary Education majors in the state

in which data collection took place. The course is worth three credit hours.

All participants in the study were exposed to the topics of language development

and reading acquisition through course material, readings, classroom discussions, group

activities, and lectures as designed and implemented by the instructor. Additionally, the

same instructor taught all of the sections of this course that employed a field experience.

This instructor is a psycholinguist who is an expert in reading and is a reading researcher

as well. At the beginning of the study, the instructor had over three years of experience in

teaching this course. Moreover, the instructor designed the tutoring project to compliment

the course.

All 86 participants in this research participated in one of two field experiences:

tutoring or observation. Forty participants engaged in a tutoring project and worked one-

on-one with a student in the area of reading, and the other 46 participants were involved

in an observation project observing students in a classroom setting. All of the university students were enrolled in one of four of this instructor's sections of the language development and reading acquisition were asked to voluntarily participate in this research. Due to the nature of this instructors teaching schedule for the course I have a nested design for this study. The 40 tutoring participants were part of two different sections of this instructor's course taught in the fall semester of one academic year. The following spring semester data was collected on 15 observer participants and then the fall of the next academic year data was collected on another 21 observer participants. It should also be noted that two sections of this instructor's course were part of an Early Childhood Education (ECE) major that implemented a cohort design. To balance out any effects of this cohort model I had one section of the ECE cohort (N=29) participate in the tutoring field experience and one section (N=21) participate in the observation field experience. Of the participants were 2.3% male and 97.7% were female. Also, the demographic information on the ethnicity of the participants was as follows: African American 7%, Asian 8.1%, Caucasian 72.1%, Hispanic 5.8%, and Other 7%. Demographic information on the four sections of this course was similar.

Again, participation in the field experience was a regular requirement of the course. Thus, participants in this study were not volunteering to engage in the field experience, but instead were agreeing to fill out the RTSES and allow the use of their pre-test and post-test Content Knowledge Assessment scores for use as research data. University students in this instructors sections of the course who did not participate in this study (N=1) were still required to engage in one of the field experiences as part of their enrollment in the course.

At the beginning of the semester, prior to participation in either field experience, the university students who agreed to participate in this research were asked to complete a demographic questionnaire, the RTSES, and the Content Knowledge Assessment. Once the field experience began, students engaged in a weekly field experience session for 30-60 minutes per week for 5-10 weeks. The specific allocation of time was different depending on which of the two field experiences participants were randomly assigned. The tutoring sessions took place during the first 30 minutes of three hour long class session. The observers individually scheduled time to observe, which depended on when reading lessons were taught at the school or university child development center.

This time allotment resulted in all participants engaging in a total of five hours of field experiences in either 30 minute or 1 hour intervals. The rationale for this time allotment was that it was an ample period of time for tutors to complete one to two reading exercises with a young child without losing the child's interest. Furthermore, it was a reasonable amount of time for the tutoring participants to put to use the strategies they were learning at the university, while leaving a reasonable amount of time for the instructor to cover course content. The observation group's field experience time was matched to this structure as much as possible.

Tutoring

Those participants who engaged in the tutoring field experience performed weekly one-on-one tutoring sessions at a local elementary school for 30-minutes a week for 10 weeks. Each participant in this group was assigned a student to work with by a local public elementary school teacher. The schools that the tutors visited were all in a large national school system within a multicultural, and multilingual community. All of

the schools involved in this study volunteered to allow undergraduate teacher education majors into their schools to work with children in the area of reading.

As the university course focused on reading acquisition in children in kindergarten through 3rd-grade, the participants were assigned to students in one of these grades. Based on previous semesters, the teachers typically assigned children who were in need of extra reading instruction to work with study participants. It should be noted that for this study, we did not collect information on the individual tutee's the tutor participants worked with. Therefore, we are not able to qualify how the individual tutor's efficacy was impacted due to their tutee's needs. We also did not collect information pertaining to the impact the tutoring project had on the tutees. However, as often as possible, the tutors worked with the same child throughout the course of the semester. In some instances, students changed schools or moved. Under these circumstances, the teacher was asked to assign another student for the tutoring sessions.

During the tutoring sessions participants were not required to perform any pre-specified intervention or program, as I wanted to evaluate how well the participants could autonomously apply what they were learning from their university course. . The tutors did have support and assistance from their instructor and me. We held group meetings wherein we discussed any questions they had about teaching their tutee. Also, the course instructor and I visited the tutoring sites and offered assistance when asked by the tutors. This was also the previous model used the by university instructor who wished to have students use the knowledge they gained in class to ascertain students' areas of need with regards to reading. In addition to determining their tutees' areas of need, tutors needed to build a rapport with their tutee, assess their tutee's reading needs, and learn about the

tutee's interests in order to use appropriate strategies to meet the individual needs of the tutee.

Each tutor worked with one individual tutee; however, this led to individual differences within the research. For example, one tutee may be in a different grade level, ability level, or have different needs than another tutee. As such, the tutors were instructed to use the first few sessions to determine the reading needs of their individual students. Simultaneously, the tutors learned about the major components of reading in the university course including: phonemic awareness, phonics, fluency, vocabulary, and reading comprehension. Indeed, one of the goals of this project was to help pre-service teachers learn to identify children's needs in the domain of reading. Once the tutors determined the needs of their individual students, they were asked to devise teaching strategies to help meet those needs.

Observations

Participants in the observation group observed students at the a university child development center or a local public school for an a total amount of time equal to that of the tutors time engaging in one-on-one tutoring (300 minutes). To facilitate this amount of time for the observers I allowed them to observe in 30-60 minute sessions for 5-10 weeks. The variation in time was dependent on the participant's ability to schedule observation times. The child development center the majority of the observers observed in is a laboratory school on the university campus that educates preschool and kindergarten age children through the employment of qualified teachers. This center works in conjunction with the university's department that houses the reading course participants were enrolled in and fosters a learning atmosphere for the children that is

also conducive to pre-service teacher observations. This includes observation booths with two way mirrors. The participants in the observation group were asked to observe either at this center or at a local elementary school and to specifically observe students who were being taught reading related skills. The observer participants completed a similar task to that of the tutors by recording the activities they observed being taught; however, they discussed strategies they would use with the students, opposed to those that were actually used.

In addition to learning strategies through class lectures, two field experience discussion groups were performed during class time. In these discussion groups, the instructor and I discussed group and individual strategies the participants could use to help meet the individual needs of the children they were tutoring or observing. Moreover, the instructor had flashcards, popular readers, workbooks, magnetic letters, and other materials available for use by the tutors. The tutors were free to choose materials to work with either independently or with guidance from either the instructor or me. Observers did not use these materials, but they did observe materials being used by the child development or local school teachers. The observers were also able to see the resources available to the participating center or school teachers and how these materials were allocated and used with regard to language and reading instruction. Throughout the remaining field experience sessions, participants made use of the strategies learned in class and materials provided by the university instructor. After each field experience session, the participants were required to complete the structured diaries as described above.

At the end of the semester and after completion of the field experience sessions, all participants completed the RTSES and the Content Knowledge Assessment again. In addition, participants turned in their 10 structured diaries. I did not analyze these diaries until the end of the semester, to allow the participants a sense of privacy. The structured diaries were class requirements but were only examined for this research for those students who consented to participation in the study.

In addition to the structured diaries, a random sample of participants was interviewed. The five minute interviews took place at the end of the semester after all of the measures and field experience sessions were completed. Each participant was shown their pre-test and post-test efficacy and content knowledge scores and asked to reflect upon any changes in these scores. Furthermore, participants were asked whether or not they would recommend the field experience portion of the class to be maintained. .

Scoring of Diaries

The tutors in this study were expected to gain an understanding of their students' needs through the field experience and activities chosen. As I feel it is advantageous for a tutor to use a number of strategies to meet the individual needs of a tutee, the diaries specifically asked about strategy use. Again it should be noted that for the purposes of this research the term strategies are used in a more layman's way as apposed to a theoretical definition. Thus, the term strategies mean instructional practices for the purposes of the scoring of these diaries.

Using these diaries I was able to gain insight into the number of different strategies, or instructional practices, each participant used. Although participants from

both field experiences used the diaries, for the purpose of this study only strategies from the tutors' diaries were analyzed.

Scoring of strategies reported as used by participants were only counted as being appropriate if they were found to be aligned with the Put Reading First Guide for Teachers (National Institute of Child Health and Human Development, 2001). If a strategy was reported but that strategy was not based on one of the five building blocks of reading from Put Reading First, that strategy was given a score of zero in this research. This guide was used because it is a publication of the U. S. Department of Education and is based on empirical research. This guide reports on the skills needed to best teach children how to read. It was also an integral part in the teaching of reading for the course. When scoring these diaries, then, instructional practices in line with Reading First were given a score of one and those not in line with Reading First were given a score of zero. An example of a strategy given a score of one was helping the child with letter identification skills; however, a strategy such as reading aloud to the tutee was given a score of zero because, although it is motivational, this study focused on instructional strategies. The list of strategies that were scored can be found in Appendix F.

As tutors were allowed to report on up to two activities used in each tutoring session I made it a rule that strategies that were used more than once in a reported activity were only counted one time. For instance, if a tutor reported using letter identification strategies for the letter "c" and then reported using letter identification strategies for the letter "b", this would be counted as one strategy. However, if a strategy was used more than once in differing activities, that strategy was counted separately. This was done to account for the fact that participants may use a strategy more than once to revisit a skill

they had already taught to the student. The rationale for this use of strategies was that it is helpful for teachers to have a number of tools at their disposal when trying to teach students to read; therefore, revisiting the same tools may be beneficial at times.

After scoring each tutor's diaries, a total number of strategies used was computed. The first and last diary entries were not analyzed, as they were sessions wherein the tutors focused on introducing themselves and saying goodbye to their tutees. An inter-rater reliability check was done wherein a second researcher rated the strategy use reported in a random sample of tutors' structured diaries (n =10). This researcher was chosen because she is knowledgeable in reading strategies. She used and understood the Put Reading First (National Institute of Child Health and Human Development, 2001) material, and she was the main instructor for the language and reading course in which the tutors were enrolled. The random sample of structured diaries was analyzed by each of the two raters. Separately, each rater counted the strategies reported by tutors in their structured diaries as an appropriate strategy or not an appropriate strategy. Both of the raters' scores were then compared and scored as either an agreement or a disagreement. A Cronbach's alpha analysis revealed an 87% agreement rate.

Reliability of Diary Reporting

In order to assess whether or not tutors gave accurate descriptions of tutoring activities in their structured diaries, random observations of the tutors were conducted. In these observations, I visited the classrooms where a tutor was reading with a tutee. During this visit, I recorded all of the strategies I saw the tutor using. Using these observations, I compared the strategies the tutors reported using versus those that I observed. I randomly observed a total of 5 out of the 40 tutors. Of the 18 strategies I

observed tutors employing, an examination of their structured diaries revealed that they accurately reported the strategies they used 15 times, or 83.3% of the time. From this, I was able to verify that these tutor participants were fairly reliable in their ability to self-report the strategies they used while tutoring.

Scoring of Interviews

The interviews were scored by using a thematic analysis of the answers. To start, the audiotapes of each interview were transcribed, and these transcriptions were analyzed by question. The first part of each question required a "yes" or "no" answer; therefore, those answers were tallied as such. The other questions called for answers that were more in depth, and certain themes appeared. Thus, I was able to categorize most answers under one of the themes. For example, if participants answered that the tutoring field experience helped them work with their tutee on their need to recognize letters, I categorized this as meeting the individual needs of the tutee. Likewise, if participants discussed their experiences using a theory they learned about in their university course with a tutee, this was categorized as linking theory to practice. If participants' answers did not fit a certain category, I made a new category. Therefore, all of the answers given in the interviews were counted equally. After each transcript was analyzed, the answers were tallied and turned into percentages.

Chapter 4: Results

The purpose of this study was to investigate changes in pre-service teacher efficacy and content knowledge, particularly in the domain of reading. Specifically, I was interested in measuring whether different field experiences would result in differences in the amount of change in reading teacher efficacy beliefs and reading content knowledge for pre-service teachers enrolled in a required reading education course. One of the field experiences consisted of the opportunity to engage in one-on-one reading tutoring with an elementary school student. The other field experience gave participants the opportunity to observe children while they were taught reading or language skills in a classroom environment. There were four overall questions driving this research.

First, I wanted to investigate possible changes in pre-service teacher efficacy beliefs and differences in pedagogical knowledge in reading that resulted from involvement in different reading field experiences. I hypothesized that participants who had a one-on-one tutoring experience would demonstrate greater change in their reading efficacy beliefs than those who were given the opportunity to observe students during reading instruction. To examine this question, repeated measures ANOVAs were performed. Prior to this analysis, a factor analysis was performed on the RTSES to examine internal validity of the scale. The results of these analyses will be discussed below.

The second question was analyzed with regard to tutors only. For this question, I wanted to examine whether tutors who reported higher levels of efficacy beliefs prior to engaging in a field experience also reported the use of more strategies while tutoring. In relation to this question, I hypothesized that participants who reported pre-test efficacy

beliefs in the top 25% for the tutoring group would be more likely to report the use of more reading strategies while tutoring than those participants whose pre-test efficacy beliefs were at the bottom 25% of the group. To compare these two groups, a t-test was performed on the number of strategies reported in structured diaries.

The third research question was: do pre-service teachers with higher reported pre-test efficacy beliefs also have higher pedagogical knowledge? I hypothesized that a positive relationship would be found between pre-service teachers' efficacy beliefs and pedagogical knowledge for both the observation and tutoring groups. To analyze this question, correlations were computed for the RTSES, each of the subscales, and the Content Knowledge Assessment.

Finally, I wanted to investigate whether or not pre-service teachers perceived the field experience as having an influence on any changes seen in their pre-test and post-test efficacy beliefs scores and content knowledge. For this question, I hypothesized that all participants would report that the field experience was pertinent to changes in their efficacy beliefs and content knowledge. To examine this question I recorded the number of participants who identified the field experience as pertinent to their change in efficacy beliefs and content knowledge.

Prior to all data analysis to address these questions, a factor analysis was conducted on the RTSES (Tschannen-Moran & Woolfolk-Hoy, 2001). These analyses were done to ensure the validity of the adapted scale.

Factor Analysis

A factor analysis of the reading specific RTSES was conducted on the data from 107 people. These included the 86 participants who took the language and reading

development course and engaged in a field experience and the 21 students who did not

engage in the field experience but did take another instructor's section of the language

and reading development course. I began this analysis with a confirmatory factor model

based on the subscales found and reported in the original TSES study. In the original

study there were three subscales: efficacy in student engagement, efficacy in instructional

practices and efficacy in classroom management. As discussed earlier, the questions

related to classroom management were omitted for this research, thus leaving two of the

original three factors for examination in this study. Therefore, a two-factor confirmatory

factor analysis was estimated separately on the pre-test and post-test data using EQS.

This analysis was done to verify whether or not the adapted, reading specific RTSES

would load on the original two factors, engagement and instruction. This two-factor

model resulted in unacceptable pre-test goodness of fit measures: χ^2 (265.36); RMSEA =

.12 (.11; .14); and GFI =.75. Also, the two factor model resulted in unacceptable post-test

goodness of fit measures: χ^2 (185.39); RMSEA = .09 (.07; .11); and GFI =.84.

Adjustments to parameters of the original two factor model were made based on item and

residual correlations. However, I was unable to create a model that resulted in acceptable

goodness of fit measures. Therefore, an exploratory factor analysis was completed.

 For the exploratory factor analysis, all sixteen adapted reading engagement and

reading instruction items from the pre-test and post-test were factored using SPSS and

principle component analysis. However, the pre-test and post-test were factored and

analyzed separately. See Tables 1 and 2 for all factor loadings. The results of this

exploratory factor analysis did not result in the same factor loadings as the original TSES.

Instead, in both pre-test and post-test analyses only ten items consistently loaded on two

factors with eigenvalues more than one. These two factors were used to analyze the data because in confirmatory factor analyses of the pre-test and post-test scores the factors did not remain stable on a one factor or three factor solution. In addition, other exploratory analyses examining one and three factor models had multiple complex loadings and items that loaded on factor one for the pre-test and factor two for the post-test. The two factor solution decided upon was the solution that minimized complex loadings and had items that remained stable on factors from the pre-test to the post test.

This final factor solution had four questions load (Q2, Q3, Q5, Q8) on factor one and six questions load (Q7, Q10, Q11, Q12, Q14, Q15) on factor two. Based on an examination of the items in these factors the factors were named "reading motivation" and "reading assessment" respectively, as the questions in these factors represented either motivation or assessment tasks while teaching reading. For example, a question in the motivation factor is: What can you do to motivate students who show low interest in reading? The focus of this question is directly related to motivation, like the other three questions in the motivation factor. Likewise, an example of an assessment question is: How much can you use a variety of reading assessment strategies? Again, this question specifically focuses on assessment. The six questions that did not consistently load on these two factors were discarded for this portion of the analysis. The results of this factor analysis were be used to determine analysis of the RTSES subscales in all subsequent analyses. Refer to Appendix B for the adapted version of the RTSES.

Table 1

Factor Loadings for Exploratory Factor Model of Reading Teacher Efficacy Pre-Test

	Factor	
Variable	I	II
Q1	.547	.443
Q2	.220	.741**
Q3	.279	.813**
Q4	.725	.260
Q5	.290	.690**
Q6	.593	.255
Q7	.669*	.258
Q8	.444	.521**
Q9	.742	.308
Q10	.795*	.267
Q11	.705*	.328
Q12	.743*	.300
Q13	.618	.343
Q14	.803*	.327
Q15	.805*	.233
Q16	.759	.398

Note. * assessment, **motivation.

Table 2

Factor Loadings for Exploratory Factor Model of Reading Teacher Efficacy Post-Test

	Factor	
Variable	I	II
Q1	.477	.533
Q2	.233	.739**
Q3	.305	.644**
Q4	.419	.468
Q5	.308	.646**
Q6	.425	.479
Q7	.582*	.454
Q8	.420	.492**
Q9	.398	.704
Q10	.564*	.470
Q11	.689*	.292
Q12	.703*	.338
Q13	.359	.359
Q14	.819*	.305
Q15	.597*	.313
Q16	.523	.550

Note. * assessment, **motivation.

As discussed previously, for the first research question I investigated whether or not there were differences in the amount of change in participants' reported reading efficacy beliefs and growth in reading pedagogical knowledge related to their field experiences, tutoring or observing. This study used a nested design, wherein an Early Child Education (ECE) cohort is balanced between tutor and observer groups. To determine comparability of the tutor and observer groups a t-test of the groups' RTSES pre-test scores and Content Knowledge Assessment scores was performed. This analysis showed that the tutor and observer groups did not differ in either their pre-test RTSES efficacy ratings $t(81) = .387, p > .05$ or their Content Knowledge Assessment scores $t(73) = 1.070, p > .05$. Table 3 shows a summary of each of the four sections of the course.

Table 3

Information by Section of Course

| | Test Scores | | | |
Group	Mean (RT)	SD(RT)	Mean(Know)	SD(Know)
Total Tutor	98.36	17.98	66.74	10.4
Tutor Cohort (Fall 1)	95.32	15.48	68.20	8.41
Tutor Non-Cohort (Fall 1)	106.09	22.12	63.68	13.63
Total Observer	96.66	21.59	63.54	14.62
Observer Cohort (Spring)	90.25	21.43	63.89	16.74
Observer Non-Cohort (Fall2)	107.89	17.29	62.77	9.01

Note. RT represents for the RTSES and Know represents Content Knowledge Assessment.

Data analysis consisted of four 2 x 2 time (pre-test and post-test), and treatment (tutor x observer) univariate repeated measures ANOVAs comparing scale (RTSES total, RTSES reading motivation, RTSES reading assessment, Content Knowledge Assessment). Results of the ANOVAs indicated that there was an effect of time for both groups of participants. Upon examination of the means, both groups of participants changed in their efficacy beliefs from the pre-test to the post-test. For the RTSES total scale as well as the subscales, results showed an effect of time, with the participants in both groups reporting higher efficacy belief levels and content knowledge from the pre-test to the post-test.

Analysis of the between group factors of the RTSES scale showed that there was a marginally significant interaction between group for the total RTSES and the RTSES reading motivation subscale but not the RTSES reading assessment subscale. An examination of the RTSES scores (M = pre-test 99.07, post-test 117.17) showed that the observers reported higher post-test efficacy belief scores than the tutors (M = pre-test 100.81, post-test 110.19). Likewise, an examination of the means showed that the observer group reported higher post-test scores on the reading motivation efficacy subscale (M = pre-test 25.89, post-test 29.72) that the observers reported higher scores than the tutoring group (M = pre-test 25.55 post-test 27.73). Additionally, results showed that there was not a significant interaction between group and reading content knowledge. Please refer to Table 4, 5, 6, and 7.

Table 4

Analysis of Variance for Total RTSES

Source	df	F	η	*p*
Between subjects				
Group (G)	1	.19	.02	.66
G within-group error	80			
Within subjects				
RTSES (R)	1	68.62***	.31	.00
R X G	1	3.13	.04	.08
R X G within- group error	80			

Note. * *p* < .05. ** *p* < .01. *** *p* < .001.

Table 5

Analysis of Variance for Reading Motivation Efficacy

Source	df	F	η	*p*
Between subjects				
Group (G)	1	1.68	.02	.20
G within-group error	84			
Within subjects				
Motivation (M)	1	37.89***	.31	.00
M X G	1	3.14	.04	.08
M X G within-group error	84			

Note. * *p* < .05. ** *p* < .01. *** *p* < .001.

Table 6

Analysis of Variance for Reading Assessment Efficacy

Source	df	F	η	*p*
Between subjects				
Group (G)	1	.09	.00	.77
G within-group error	81			
Within subjects				
Assessment (A)	1	73.79***	.48	.00
A X G	1	1.87	.02	.18
A X G within-group error	84			

Note. * *p* < .05. ** *p* < .01. *** *p* < .001.

Table 7

Analysis of Variance for Content Knowledge Assessment

Source	df	F	η	*p*
Between subjects				
Group (G)	1	.09	.00	.77
G within-group error	65			
Within subjects				
Content Knowledge (C)	1	292.32***	.82	.00
C X G	1	.556	.01	.46
C X G within-group error	65			

Note. * *p* < .05. ** *p* < .01. *** *p* < .001.

To summarize, both groups of participants rated themselves higher in efficacy beliefs and had higher scores on the Content Knowledge Assessment from the beginning to the end of the reading course and field experience. Analysis of the group means showed that the observers rated themselves higher in efficacy beliefs than the tutors; however, these differences were only moderately significant between groups for the RTSES total scale and RTSES subscale of reading motivation efficacy. Refer to Table 8 for means and standard deviations.

Table 8

Means and Standard Deviations for Reading Efficacy and Content Knowledge

Group	Mean (Pre)	SD (Pre)	Mean (Post)	SD (Post)	Change
Tutor Total	98.34	17.98	110.35	14.1	12.01
Observer Total	96.66	21.59	115.13	15.43	18.77
Tutor Motivation	25.55	4.81	27.73	3.78	2.18
Observer Motivation	25.89	5.53	29.72	3.94	3.83
Tutor Assessment	36.77	7.75	42.55	6.55	5.78
Observer Assessment	35.25	9.63	43.15	6.44	7.9
Content Knowledge					
Tutor	66.39	10.36	92.97	11.05	26.58
Observer	64.18	14.88	93.18	11.04	29.00

Note. The total RTSES contains 16 questions on a 9-point Likert scale. The motivation subscale contains 4 of these questions, and the assessment subscale contains 6 of these questions.

As I am interested in examining change in pre-service teachers efficacy belief and the means of these RTSES total scale and subscales all showed a positive change in efficacy ratings from pre to post test I decided to examine the raw subject data to determine if there were any participates who rated themselves lower on efficacy beliefs after having completed the field experience. This examination revealed that there were several individuals who rated themselves lower in efficacy beliefs after participation in a field experience. Of the 86 participants in this study 14 rated themselves lower in efficacy beliefs after the field experience, seven of these participants were tutors (17%) and seven were observers (15.22%). All other participants reported higher efficacy beliefs from the

beginning to the end of the field experience. Thus, it appears that the picture presented by the mean RTSES scores is an accurate one in that most participants in this study rated themselves higher in efficacy beliefs at post-testing. In addition, any negative changes in efficacy beliefs were equally distributed across participant groups and as such cannot be accounted for by differences in the field experience. Please refer to Table 9 for a complete list of individual mean scores on the total RTSES.

Table 9

Information by Individual

Tutor	RTSES (pre)	RTSES (post)	Observer	RTSES (pre)	RTSES (post)
1	109	104*	41	91	114
2	97	125	42	112	123
3	76	89	43	96	118
4	91	112	44	116	127
5	81	126	45	89	124
6	103	128	46	91	113
7	100	109	47	119	125
8	90	111	48	112	130
9	109	118	49	133	135
10	120	132	50	105	110
11	92	93	51	97	142
12	80	114	52	91	104
13	99	127	53	140	143

14	115	110*	54	101	120
15	93	111	55	138	136*
16	89	88*	56	95	123
17	86	96	57	99	
18	74	116	58	72	104
19	102	121	59	87	86*
20	116	120	60	107	130
21	100	109	61	66	114
22	107	108	62	93	115
23	114	126	63	103	119
24	46	67	64	106	105*
25	91	103	65	103	114
26	93	106	66	107	112
27		109	67	101	96*
28	91	106	68	126	128
29	105	122	69	117	127
30	78	103	70		133
31	97	106	71	114	103*
32	126	122*	72	81	99
33	104	121	73	87	107
34	113	116	74	89	112
35	120	92*	75	89	123
36	130	128*	76	122	111*

37	101	103	77		96
38	141	130*	78	91	113
39	74	89	79	45	95
40	83	98	80	78	121
			81	54	111
			82	87	102
			83	42	101
			84	73	123
			85	82	60*
			86	106	124

Note. * lower reported efficacy

Strategy Use and Efficacy

Question two only examined the tutors and investigated whether or not tutors who rated themselves higher in pre-test efficacy beliefs used more strategies while tutoring reading than those who rated themselves lower in efficacy beliefs. Again, it should be noted that for this research, the term strategy did not refer to the theoretical notion of a strategy but to instructional practices tutors used with their tutees. To begin this analysis the participants in the tutoring field experience group were split into two groups based on their RTSES pre-test efficacy ratings.

A t-test comparing the total number of appropriate strategies used by pre-service teachers revealed that there was not a significant difference between the tutors who rated themselves as having the highest efficacy beliefs, the top 25% of participants, and those who rated themselves as having the lowest efficacy beliefs, the bottom 25% of

participants. . These "high" and "low" groups did not differ in their use of strategies $t(9)$ =-.675, $p > .05$ based on what they reported in their structured diaries. These findings revealed that pre-test efficacy levels were not related to the number of strategies the tutors used when working with a student.

Teacher Efficacy and Pedagogical Knowledge

In question three I investigated whether or not pre-service teachers with higher reported efficacy beliefs also had higher pedagogical knowledge. A correlational analysis was employed to determine whether there is a relationship between pre-service teachers' efficacy beliefs and pedagogical knowledge for both the observation and tutoring groups. Findings revealed that there was not a correlation between efficacy and content knowledge for either of the participant groups. See Table 10 for all correlations.

Table 10

Correlations between RTSES and Reading Content Knowledge

Subscale	1	2	3	4	5	6	7	8
				Participants (n = 86)				
1. Know (pre)		.33	.15	.13	.06	.07	.04	.10
2. Know (post)	.44**		.01	-.15	.07	-.14	-.05	-.09
3. Toteff (pre)	-.22	.04		.64**	.87**	.39*	.92**	.70**
4. Toteff (post)	-.15	-.01	.54**		.64**	.86**	.56**	.89**
5. Motivate (pre)	-.06	-.07	.74**	.51**		.46**	.68**	.69**
6. Motivate (post)	-.09	.06	.42**	.90**	.57**		.27	.63**
7. Assess (pre)	-.19	.05	.97**	.52**	.59**	.36*		.65**
8. Assess (post)	-.23	.00	.55**	.97**	.48**	.81**	.56**	

Note. Top the right diagonal are the correlations for the tutors and the lower left diagonal are the correlations for the observers * *p* < .05. ** *p* < .01. *** *p* < .001.

Pre-Service Teachers' Perceptions of Field Experiences

In question four I examined whether or not participants in both field experiences reported that the experience was pertinent to changes in efficacy beliefs and growth in content knowledge from the beginning to the end of the semester. In other words, I wanted to know whether or not the participants believed that the field experience helped their understanding of course material and impacted their efficacy beliefs. A sample of tutors (*n* =9) and observers (*n* =7) were asked to participate in this portion of the study. To begin the interview, these participants were shown their pre-test and post-test efficacy and content knowledge scores and then asked questions about what they believed contributed to any changes in their scores. The interview consisted of three main

questions for each of the field experience groups. A copy of an interview can be found in Appendix E.

To begin, some of the interview questions required a simple "yes" or "no" answer, as such these responses were easy to label. However, a number of the interview questions were open ended, and in some cases interviewees answered a question by naming more than one factor that they felt contributed to the change in their efficacy or content knowledge. In these cases, I decided each answer was of equal importance, and as such I counted more than one answer for some participants. Thus, the percentages tallied represent how many participants responded with that answer. Please refer to Appendix G for a sample of an interview transcript.

In question one, participants were asked to evaluate what contributed the most to their change in efficacy beliefs. In the tutoring group, the participants' tutoring experience was the most common answer, which was given by eight out of nine, or 88.89%, of tutor participants. However, when the observers were asked the same question the observation experience was reported as being important to their change in efficacy by 28.57% of the participants. For this question, the university course and materials from that course was the answer most often given by observers (57.14%). In comparison, the tutors reported that their field experience contributed the most to their change in efficacy more often than the observers. For percentages of answers please refer to Table 8.

For question two I asked participants what they believed contributed the most to their change in pedagogical knowledge in the domain of reading. Again, a number of participants gave more than one answer to this question, each of which was counted. Contrary to the answers given for question one, 22.22% of the tutors stated tutoring, and

55.56% stated the university course was the factor that contributed the most to their change in pedagogical knowledge. Likewise,14.29% of the observers reported the observation, and 85.71% of the observers reported the class contributed the most to their growth in pedagogical knowledge. Both tutors and observers reported the university course as contributing the most to their pedagogical knowledge.

       Question three asked participants whether or not they would recommend the field experience component of the class to remain, to which each tutor participant (100%) answered yes, as well as 57.14% of the observation participants. Part two of question three asked participants how the field experience affected their efficacy. The majority of tutor participants (22.22%) were evenly divided between the responses that it helped them in linking theory to practice, understanding students' individual needs, and seeing progression of the student. With regard to the second part of question three, the observer participants (28.57%) were also divided in their responses, as they reported it affected them in the area of classroom management, what not to do in the classroom, or it did not help. Finally, in part three of question three, participant were asked how the field experience affected their content knowledge. The majority of both tutors (88.89%) and observers (57.15%) responded that the field experience affected their content knowledge by helping them link theory to practice. For percentages of answers given per group please refer to Table 11.

Table 11

Percentages of Interview Responses

Total $N = 16$

Question	Answer	Tutor	Observer
	Tutor		
Was change in efficacy Expected?	Yes	66.67%	85.71%
	No	11.11%	0%
	No Answer	11.11%	14.29%
What contributed most to the change in efficacy?	Tutor/Observe	88.89%	28.57%
	Theory to Practice	11.11%	0%
	No Answer	11.11%	0%
	Class/Materials	0%	57.14%
	Readings	0%	14.29%
	Instructor	0%	28.57
Was the change in knowledge expected?	Yes	33.33%	42.85%
	No	0%	14.29%
	No Answer	66.67%	42.86%
What contributed to the change in knowledge?	Class	55.56%	85.71%
	Tutor/Observe	22.22%	14.29%
	Theory and Strategy	22.22%	0%
	Instructor	22.22%	14.29%
	No Answer	0%	14.29%
Would you recommend the tutor/observe component remain in the class?	Yes	100%	57.15%
	No	0%	14.29%
	Maybe	0%	28.57
How did the field experience impact your efficacy?	Theory to Practice	22.22%	14.29%
	Activities	11.11%	0%
	Classroom Difficulty	22.22%	0%
	Creativity	11.11%	0%
	Students as Individual	22.22%	14.29%
	Student Progression	22.22%	0%
	Classroom Manage	0%	28.57%
	What Not to Do	0%	28.57%
	Did Not	0%	28.57%

How did the field experience impact your knowledge?	Theory to Practice	88.89%	57.15%
	Individual Learners	22.22%	0%
	Classroom Manage	0%	14.29%
	Student Motivation	0%	14.29%
	Did Not	0%	42.86%

Chapter 5: Discussion

The purpose of this study was to investigate the impact a field experience had on pre-service teachers' efficacy beliefs and content knowledge in the domain of reading. Participants in this study were involved in one of two field experiences: tutoring or observations. Participants who tutored were involved in instructing an elementary school child (their tutee) in the domain of reading. This one-on-one instruction was given directly from the tutor to the tutee. Participants in the observation field experience watched elementary school teachers instruct elementary school children in the areas of reading and language.

Results of pre-test and post-test data showed that both the tutors and observers rated themselves higher in reading efficacy beliefs and content knowledge from the beginning of the study to the end. In other words, after taking a university reading methods course and participating in a field experience, participants believed themselves to be better able to teach in the area of reading and increased their content knowledge in the area of reading. I hypothesized that in addition to change over time there would also be a difference in the amount of change between groups in efficacy beliefs and content knowledge based on the difference in field experiences. I believed that the tutors would show greater changes in their efficacy beliefs and content knowledge than the observers. This hypothesis was based on Bandura's belief that mastery experiences are the most effective way to create a high sense of self efficacy (1994). However, in mastery experiences success raises efficacy, while failure lowers efficacy. Therefore, for this hypothesis I focused on the amount of change opposed to the direction of this change. With regard to this notion, Parameswaran (1998) found that pre-service teachers who

attended a field experience were more confident in their abilities to work with children from diverse backgrounds than their counterparts who did not attend the field trip. Likewise, Plourde (2002) found that there was a change in efficacy after a field experience. Thus, I believed a greater amount of change would be reported by the tutors due to the more hands-on nature of their field experience.

Contrary to this hypothesis, only marginally significant differences were found between the amounts of change in reading engagement efficacy and reading motivation efficacy; however, in this case it was the observers who changed more in their efficacy beliefs than the tutors. Furthermore, analyses showed that there was not a difference between tutors and observers in the amount of change in reading instruction efficacy, reading assessment efficacy, or reading content knowledge. These findings indicate that the different field experiences did not impact the participants with regard to reading instruction and reading assessment efficacy beliefs or content knowledge. Although the participants had hands-on experiences, these field experiences did not impact the amount of knowledge they obtained from the course.

With respect to the number of appropriate strategies used while tutoring students, results did not show a significant difference between tutors with high efficacy and those with low efficacy beliefs based on pre-test efficacy scores. Again, this finding is contrary to my hypothesis in that tutors who had higher pre-test efficacy beliefs did not use a significantly greater number of reading strategies while working one-on-one with their tutees when compared with tutors who had low pre-test efficacy. My original hypothesis was based on previous research which suggests that teachers' efficacy beliefs influence specific classroom behaviors known to yield achievement gains (Gibson and Dembo,

1984). This research did not support the past research, in that efficacy did not impact the number of reading strategies used by the tutors.

It should be noted, however, that an examination of the raw means for strategy use by tutors showed that the high efficacy pre-test group did use a greater number of strategies (M = 7.36) than the low pre-test efficacy group (M = 6.66) when examined using the RTSES scale. Likewise, analysis of the means for the new RTSES high efficacy group (M = 6.96) resulted in a greater number of strategies used when compared to the new RTSES low efficacy group (M = 6.31). However, these differences were not large enough to be statistically significant.

Likewise, analyses showed that there were no significant correlations between reading efficacy and reading content knowledge, as was hypothesized. Unlike the previous hypothesis, this hypothesis was not based on previous research but upon my own belief that pre-service teachers who had higher efficacy would be likely to gain more content knowledge from their coursework. I also believed that if pre-service teachers with high efficacy found course material challenging, then they would be more likely to persist longer at attempting to master the course material. A notion supported by research that shows that self-efficacy beliefs strongly predict individuals' achievement (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001) and that people who are efficacious set challenges for themselves and persist in their efforts until they achieve (Plourde, 2002).

Interviews revealed that when comparing tutors and observers all of the tutors felt that the field experience should be implemented in future classes, while a little over half of the observer participants stated the same. Likewise, tutors more frequently cited the tutoring experience as contributing the most to their change in reading efficacy, while

observers felt the class and materials contributed the most. However, both groups of tutors and observers who were interviewed did not widely report that the field experience had a significant impact in their change in reading content knowledge. In fact, both tutors and observers most frequently reported the university course as contributing the most to their pedagogical knowledge.

For this research, I felt a field experience would be more widely reported as having an impact on learning content knowledge. I especially felt this would be the case, as the field experiences and course material were domain specific. Therefore, it is somewhat surprising that there were no real significant findings from the first three questions driving this research. Furthermore, the significant findings I did have were only marginally significant and showed that the observers had greater change in efficacy than the tutors.

Field Experience Similarities and Differences

As may be expected, the pre-test and post-test nature of this research showed that all of the participants reported a change in their reading efficacy and reading content knowledge over the course of the semester. These findings are in line with Newman (1999) who found that pre-service teachers were more efficacious after taking a 10 week course. My research differs from previous research in two key ways. First, my research focused only on domain specific knowledge and the link between efficacy beliefs specific to the domain of reading and content knowledge specific to the domain of reading. Second, I used a control group, which also engaged in a field experience project in order to empirically determine whether or not the hands-on nature of the tutoring task directly impacted efficacy beliefs and content knowledge.

Previous studies on pre-service teacher efficacy (Parameswaran, 1998; Newman, 1999) reported on students' general efficacy beliefs after having engaged in a field experience in a general educational psychology course. I chose to examine domain specific efficacy as I felt that efficacy should be measured in relation to what the pre-service teacher was learning since teaching is domain specific. One previous study investigated domain specific efficacy through student teaching, but its focus was the domain of science (Plourde, 2002). Although the domain specificity of my study is somewhat consistent with the research conducted by Plourde, the findings are not. Plourde found that pre-service teachers did not have a difference in efficacy beliefs, but they did have a lower sense of confidence in their ability to make a difference in the area of science after completing student teaching within the specific domain of science. In my domain specific research, both groups of participants rated themselves as higher in efficacy beliefs within the domain of reading. These findings differed from my hypothesis, as I believed that the tutors would change more than the observers. This belief is based on the notion that when pre-service teachers are able to have a hands-on experience, such as tutoring, they would be more likely to experience a greater amount of change in efficacy in that domain than pre-service teachers who did not participate in the same type of hands-on experience. In fact, Bandura (1994) stated that such mastery experiences (tutoring) should have more of an influence on efficacy beliefs than vicarious experiences (observing).

One possible reason this study did not show a difference in change in efficacy beliefs may be aspects of the field experiences themselves. There were differences in the field experiences given the hands-on nature of the tutoring and the hands-off nature of the

observation task. However, there were also many similarities between the two experiences that may have contributed to the lack of differences in the amount of change found.

One similarity between the two field experiences was the control of time. Observers spent as many hours in the classroom observing elementary school teachers instructing elementary school students in reading or language lessons as the tutors did working with a tutee. Moreover, the observers completed a similar structured diary in which they reflected on their observations in the same manner as the tutors. There was also a control of instructor in that both the tutors and observers were taught by the same professor. These controls were put in place to help the experimenter create an empirical examination of the influence a specifically hands-on field experience had on efficacy beliefs and content knowledge versus an experience that was not hands-on. As such, the use of an observation group as a control may have been a very stringent control and may have served to minimize the impact of the differences in the two field experiences.

Despite this strict control of time, reflections, and instructor there were some minimal difference found between participant groups in their beliefs about engagement and motivation efficacy. These differences are likely based on the aspects of the field experiences that differed between participant groups. First, the tutors were able to work hands-on and one-on-one with students outside the classroom with minimal influence from the teacher. In contrast, the observers had an experience laden with influence from the classroom teacher. In fact, most of their experience would have been based on the teaching style and knowledge of the teacher they were observing. For example, if an observer had the opportunity to watch a very experienced teacher who had a similar style

to their own, they may have had a more positive experience than another observer whose situation was not as optimal. The experience of the observing a teacher could have untold influences on the study participants who observed versus those who tutored.

The field experiences also differed in that each tutor was assigned an elementary school student to work with as a tutee. The tutor had a mastery experience wherein they had to execute one-on-one reading instruction to the tutee. This means that the tutor had many responsibilities. First, the tutor was responsible for gauging the needs of the tutee. Second, the tutor needed to address those needs by creating lessons individualized to the tutee's needs and interests. Third, the tutor engaged the tutee in the lesson. Fourth, the tutor assessed whether or not the lessons met the needs of and engaged the tutee. Finally, if the tutee's needs were not met, or the tutee was not engaged, the tutor could have attempted another strategy to meet those needs. This one-on-one experience required a lot of work, as the tutors' success was dependent on their tutee's success. In all, the tutor was entirely responsible for planning and executing 30 minutes of instruction a session and adjusting future instruction based on the tutee's achievements. Likewise, the tutors were not only responsible for teaching the tutees but also keeping them engaged in the lesson they were attempting to execute. Unlike the observers, this hand-on experience allowed for the tutors to get immediate feedback as to how their strategies for engagement and instruction were working.

In contrast, the observers never had an actual one-on-one experience teaching or engaging a student. Instead, they had a vicarious experience, wherein they watched another experienced teacher engage and instruct a student. As my research took place anywhere from 5 to 25 weeks into the school year, these teachers had a considerable

amount of knowledge about each of their students and past teaching experience. As such, these teachers were able to use their past experiences and knowledge of students to engage and instruct those students.

These differences, especially within the area of reading engagement, could account for the differences found in efficacy beliefs for the observers' and tutors' post-field experiences. Perhaps this difference in the amount of change may be due to the notion that attempting to engage a child in a reading activity proved to be more difficult than it looked. Indeed, one may question how the observers felt they would be more successful at a task they had never done than the tutors who had this hands-on experience. This leads back to the question of what pre-service teachers are basing their efficacy beliefs on, and are high pre-service teacher efficacy beliefs always a good thing if they are based on false perceptions of ability?

Is High Pre-Service Teacher Efficacy Good?

Past research suggests that the higher the teacher efficacy the better. Many studies have found positive teacher practices to be related to teacher efficacy (Allinder, 1995; Bandura, 1993; Meijer & Foster, 1988; Woolfolk & Hoy, 1984). The majority of these studies, however, were done on in-service teachers. These in-service teachers had experience in the classroom, in engaging children in lessons, in instructional practices, and in classroom management techniques as measured by the RTSES subscales. Despite the fact that it measures these real world tasks, this same TSES scale has been used to examine teacher efficacy in pre-service teachers who lack these real world experiences. These pre-service teachers are often asked to project how they think they would be able to teach in the future even though they do not have any experience. In fact, Benz,

Bradley, Alderman, and Flowers (1992) found that pre-service teachers had higher efficacy beliefs than in-service teachers with regard to motivating students. This is despite the fact that these pre-service teachers had never had an experience motivating a student. Thus, researchers have no way of determining what these pre-service teachers are basing their beliefs upon.

In this research, the tutoring participants were given a hands-on experience from which to base their post-test efficacy ratings, as opposed to the observers who did not have a hands-on experience. Although all of the participants had field experiences, the observers were not directly engaged with the elementary school students they observed learning. As discussed earlier, the tutors had a lot of responsibility in helping their tutees in reading, while the observers watched experienced teachers instruct elementary school students. As such, working with the tutees may have given the tutors a real first-hand understanding of the amount of work it takes to engage students in reading activities. Observing an experienced teacher may have led the observers to feel it is easier to engage an elementary school student in reading than it really is, and this reality could have led to the lower efficacy ratings found for the tutors in reading engagement and reading motivation.

At first glance these efficacy scores may seem to suggest that observations are better for pre-service teachers than tutoring. However, upon further thought it could in fact be more beneficial for pre-service teachers to have somewhat lower efficacy beliefs upon entering a classroom for the first time. It is possible that tempered expectations may allow pre-service teachers to have a more realistic understanding of what they will be able to accomplish in a classroom. Also, these tempered expectations could possibly help

alleviate some of the potential frustration one may encounter in their first years of teaching. For example, a teacher who enters the classroom with high efficacy beliefs may not realize that some of the lessons they teach will not always reach all of their students. This teacher could spend hours working on a lesson plan only to find out that even the best plans can fail to meet expectations for student learning. If this teacher's high sense of efficacy is based on unrealistic expectations, failure to meet the expectations could lead to dramatic decreases in efficacy beliefs and decrease the teacher's efforts in the classroom. On the other hand, a new teacher with more realistic efficacy beliefs, even if these beliefs are of a lower level, may be better suited for the highs and lows of the school year and may be better prepared to deal with the notion that some lessons will be more successful than others. Moreover, if new teachers feel that they have failed and that this failure is not a natural part of early teaching, they may have a decrease in efficacy. This decrease in efficacy may be taken harder for those who believe they have failed, as opposed to those who understand that they need to reanalyze their lesson and attempt to teach that lesson again.

Perhaps tutors stated the field experience should remain for future classes more often than the observers because they felt that tutoring helped them to understand the realities of engaging and teaching an elementary student, even if it led to less change in domain specific efficacy. In fact, less change could be a true benefit, if it reflects efficacy beliefs based on more realistic expectations of what can be achieved while teaching. In all, an examination of the literature on teaching efficacy leads one to believe that higher efficacy is better than lower efficacy. However, the findings of my study lead to questions about

this with respect to pre-service teachers. This may be a population wherein tempered

expectations are better than false beliefs.

Tutors' Use of Strategies and Content Knowledge

There are findings from my study that support the notion that self-efficacy beliefs

differ for pre-service teachers than for in-service teachers. The results of my strategy

analysis suggest that high efficacy in pre-service teachers does not yield the same

benefits as have been found for in-service teachers. Gibson and Dembo (1984) found that

teacher efficacy influences specific classroom behaviors that are known to yield

achievement gains. Likewise, Guskey (1988) found that teachers with high self-efficacy

beliefs were more likely to embrace innovative techniques in the classroom. However, I

did not find the same benefits of higher pre-test efficacy beliefs when I analyzed the

"high" and "low" efficacy tutoring groups' use of strategies.

With regard to high efficacy in pre-service teachers researchers found a

correlation between high efficacy scores and high knowledge scores (Schoon & Boone,

1998). However, my research did not have a similar finding. In the tutor and observer

groups, there was not a correlation found between reading efficacy and reading content

knowledge. One reason for this may be that, again, we do not really know what some of

the pre-service teacher's efficacy beliefs are based on. In other words, with regard to pre-

service teacher high efficacy may not actually have the benefits that high efficacy has for

in-service teachers.

Domain Specificity

In addition, it may be that teacher efficacy beliefs not only differ for pre-service

and in-service teachers but for general versus domain specific beliefs. Perhaps pre-service

teachers who are able to rate their efficacy on a domain specific scale are more aware of their belief in their ability to teach that subject as opposed to the many other subjects they will need to teach in the classroom. This self actuality may be helpful, as a teacher may feel efficacious when teaching reading but not when teaching mathematics.

The findings of my interview showed that the majority of tutors and observers reported that the field experience helped them transfer their university course material into practice. While a domain specific field experience may have benefits, the domain in which pre-service teachers were asked to teach may not have been one of their choosing. A lack of autonomy when it relates to domain specificity in the classroom is important in that pre-service teachers should have the understanding that when they are in the classroom they may feel more efficacious in some subjects than in other subjects. However, when pre-service teachers become in-service teachers, they will not necessarily have autonomy when teaching, as most elementary school teachers are required to teach a number of subjects. Thus, understanding the connection between teaching reading and reading efficacy may be beneficial to teachers' personal understanding of their own teaching. For example, if teachers know that they really enjoy teaching reading, they may be more likely to work harder when teaching that subject. However, if teachers understand that they feel less efficacious when teaching reading, they may work harder or seek out help when teaching that subject. Understanding how one feels about teaching within different domains before actually entering the classroom may lead to less frustration once in the classroom.

Before discussion of the overall implications of this work it is important to acknowledge the limitations. The first major limitation of this work is that the study took place in the same university as part of only one reading course with only one professor for all participants. Thus, the generalizability of this study may be quite limited. However, it is my hope that this research spurs other larger scale studies that will allow for more diversity in both of the field experiences and the participants as well as a greater expansion of our knowledge of the influence that reading field experiences have on the training of reading teachers.

Another limitation had to do with the scheduling for the participants who observed children. Throughout the course of the study every effort was made for observers to watch children during a reading activity; however, due to the nature of the classrooms and scheduling at the observation center, this did not always happen. Whenever observers were unable to watch a reading activity they were asked to observe children's use of language due to the strong relationship between the two. This scheduling issue may have impacted the observers' change in efficacy and content knowledge in that they were not always able to witness pure reading instruction. This scheduling problem may have also led to the observers' interview answers. When interviewed they answered that the field experience should be continued for future classes less often than the tutors. Since observers had to take an extra step and link language and reading, they may not have found this experience to be as helpful.

Additionally, the tutors each worked with a different tutee, which may have had an untold impact on their change in efficacy since all of the children had their own areas

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of need and educational backgrounds. However, all the elementary school students were recommended by their homeroom teachers as a child in need of additional reading instruction. Therefore, these tutees were representative of the children the pre-service teachers may see in their future classrooms. It is possible that one tutee may have been more challenging or less responsive than another, but this is representative of future children the participants may encounter when they become teachers. These individual student differences could have had untold implications on the change in efficacy in a tutor. For example, one tutee may have been a second language learner, and this may have added to the difficulty in teaching that child to read. Another tutee may not have been at all motivated to learn, which could have led to frustration for the tutor and tutee. In comparison, a different tutee may have been extremely motivated to read and easier to engage in instruction. These differences could have led to a large amount of change in one tutor, while the previous experiences may have led another tutor to feel less efficacious.

Implications and Future Directions

To begin, the domain specific nature of the RTSES survey allowed me to better understand what the participants thought their abilities were in the classroom with regard to specifically teaching reading. The domain specific tutoring aspect of this study provided pre-service teachers with a field experience to have a hands-on experience with elementary school students, which the tutors found to be beneficial to their domain specific efficacy. Therefore, this aspect of the study may have future implications to pre-service teachers. Despite the fact that there was not a significant difference in change in efficacy beliefs, the tutors' unanimous response that the tutoring project should remain a

part of the course could be viewed as support for the project being a motivational aspect of the course.

It would seem that the overall picture painted by this work is not one of concrete answers but of questioning implications implied by previous work. It seems that all the previous literature to date suggests that the higher a teacher's efficacy beliefs the better. In this research I found that pre-service teachers with high efficacy beliefs do not engage in the use of more strategies than those with low efficacy beliefs. These findings are in contrast to the work of Gibson and Dembo (1984) who suggested that high efficacy leads to behaviors that yield achievement gains for students. In addition, the marginally significant increase in teacher efficacy in reading engagement for the observation group suggests that observer's ratings could have been based on false beliefs in their own abilities.

Since one of the main goals of teacher training is to help prepare quality teachers who are effective in teaching children in different classroom situations, it would seem that having false beliefs in one's own ability to teach could be detrimental to those entering a classroom for the first time. Inflated beliefs that are not based on reality may become deflated when failure to meet expectations is encountered. Thus, preparing pre-service teachers to have realistic expectations of what they will be able to do in the classroom may actually help them be better teachers and want to stay in the profession.

Future research should examine this possibility through longitudinal studies that follow pre-service teachers after their university experience. Future research should look into whether or not pre-service teachers who tutor have tempered efficacy beliefs when they enter the classroom and if these tempered efficacy beliefs serve them better in their

future teaching. That is, after a year of teaching are these teachers less likely to have a drop in efficacy or feel less frustrated than those teachers who came into the classroom with higher efficacy?

Another aspect of the tutoring experience that future researchers may want to explore is how pre-service teachers rate their own efficacy on strategies they actually use with students. This would be interesting and novel research since pre-service teachers are often asked to discuss how effective they believe they would be at a particular task. In most cases, pre-service teachers have not already completed a teaching task upon which to base this decision. Asking pre-service teachers engaged in a hands-on learning experience to rate their efficacy on a task may help pre-service teachers report more realistic efficacy beliefs.

This research also found that tutors in this study who had higher efficacy beliefs did not use more strategies when tutoring than those with lower efficacy beliefs. In conjunction with this finding, one may question what strategies were used by the tutors. For example, although tutors with high efficacy did not use more strategies, did they attempt to improve upon the strategies they did use? Also, were the tutors more likely to attempt to use a variety of strategies, or did they just reuse the same strategies? Although this analysis is beyond the scope of the present research, I do have this type of data in the journals of my participants, and attempting to answer this question will be one of the next steps in this research.

Additionally, future studies should also examine how tutoring impacts the participants teaching longitudinally. A longitudinal study examining participants during their pre-service course work, into their in-service work, and through the first year or

more of full time teaching could help determine whether or not having time with hands-on experiences as a pre-service teacher has an impact on future teaching performance. As the research showed that tutors with high efficacy did not use more strategies when working with the tutees than those with low efficacy, it would be interesting to investigate whether or not pre-service teachers who tutored are able to use more strategies when they enter the classroom. Furthermore, one may ask if these teachers are more able to improve upon their reading instruction while in the classroom.

More domain specific research should also be examined. Studies of this kind may help researchers better understand what they can do to influence pre-service teachers, and it may help if they are able to hone in on the specific aspects of the topics on which they need to work. Therefore, domain specific research should focus on numerous domains, not just reading.

Another aspect of this field experience that may assist teacher preparation programs in better training pre-service teachers is the notion that this experience gave the pre-service teachers insight into the individual students that will make up the whole of their classroom. While it may be hard to remember that every student has individual needs and interests when one is faced with 20 or more children, after taking time to work one-on-one with a student it may be easier to recall. Considering each student as an individual while attempting to understand and meet that individual's needs is an aspect of teaching that a teacher needs to understand. Future researchers may want to investigate if a field experience may be one way of helping pre-service teachers better understand and meet the needs of their future students.

Finally, the unexplored area of how tutoring influences elementary school students' achievement and engagement is another area in need of investigation. As it is arguably a fruitful experience for pre-service teachers to work with students, further exploration of how this impacts the tutee is important. Therefore future research should examine how elementary school students who have been tutored differ in their achievement growth than those who have not. With the current federal mandates, this may be one way to help ensure that all elementary students are learning to read.

Conclusion

In general, this research did not have the findings that were anticipated. However, there are still implications for educational research. First, this research may lead one to question whether or not higher efficacy beliefs for pre-service teachers is better than lower, more realistic efficacy beliefs. Past research suggests that the higher the efficacy the better (Allinder, 1995; Gibson & Dembo, 1984; Guskey, 1988). While this may be true for in-service teachers, this may not be the case for pre-service teachers. In this research pre-service teachers were exposed to real world classroom experiences, but these field experiences differed. While the tutors worked individually with one elementary school student in reading, the observers watched an experienced teacher instruct students in reading. This led to different responsibilities between the groups, mainly in the area of engaging students in instruction, and this is one of the areas in which I found a marginally significant difference between the two groups. One reason for this finding may have been that watching an experienced teacher engage students in reading may have looked easier than it really was. If pre-service teachers do not have real world

experiences from which to gauge their efficacy beliefs, then one may question where these beliefs come from.

Is higher efficacy better for pre-service teachers when it is not based on experience? One of my findings suggests not, as tutors who reported higher efficacy were not found to use more reading strategies while tutoring than those with lower efficacy. Therefore, one may ask whether or not this high efficacy helped. Furthermore, pre-service teachers with high efficacy beliefs that are not based on real teaching experiences may be more likely to have a drop in their efficacy beliefs when they enter the classroom.

Finally, a unanimous amount of tutors felt that the field experience should be implemented in future classes, despite having a smaller amount of change in their efficacy. This finding shows that tutoring may be one way to help pre-service teachers learn while working with a student in a hands-on experience. In all, it seems that more research is needed to further investigate how efficacy beliefs influence pre-service teachers both while they are at the university and once they are in-service teachers in the classroom.

Appendix A

Demographic Information

1. Gender: 1. M   2. F

2. Age in Years: _____

3. Ethnic Group (please circle one):
    1. African-American
    2. Asian/Asian-American/Pacific Islander
    3. Caucasian
    4. Hispanic
    5. Native American
    6. Other _____

3. How many years have you been in the Education Program at UMD?
    _____

4. What grade/grades do you plan to teach when you graduate?
    _____

5. Are you interested in working in a specialty area (ex. Reading Specialist, Counselor, Special Education), and if so in which area?   _____

6. Have you had experience tutoring a child in reading before?

    If so, what was the experience and how long did it last?

Teacher Beliefs	How much can you do?								
Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.	Nothing		Very Little		Some Influence		Quite a bit		A great deal
1. How much can you do to help your students think critically while reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2. How much can you do to motivate students who show low interest in reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3. How much can you do to get students to believe they can do well in reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4. How well can you respond to difficult questions from your students about reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5. How much can you do to help your students value reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6. How much can you do to gauge student comprehension of reading skills you have taught?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. To what extent can you craft good reading questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8. How much can you foster student creativity while reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. How much can you do to improve the understanding of a student who is failing reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10. How much can you do to adjust your reading lessons to the proper level for individual students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11. How much can you use a variety of reading assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12. To what extent can you provide an alternative explanation or example when students are confused about reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
13. How much can you assist families in helping their children do well in reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
14. How well can your implement alternative reading strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15. How well can you provide appropriate challenges for very capable readers?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
16. How much can you do to get through to the most difficult students in reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Note. Adapted from Tschannen-Moran., M., & Woolfolk-Hoy., A (2001).

Appendix C

Content Knowledge Pre-Test/Post-Test

Name:_____

MULITPLE CHOICE QUESTIONS

1. The stages of reading development in which a child is l*earning how to read* as apposed to reading to learn are:
    a. emergent literacy, learning the new, and a world view
    b. emergent literacy, confirmation and fluency, and multiple view points
    c. emergent literacy, decoding and confirmation and fluency
    d. decoding, emergent literacy, and a world view

2. Emergent literacy refers to
    a. the child's earliest awareness of the functions and forms of literacy, such as print awareness
    b. literacy that is acquired during the adult years, such as critical reading skills
    c. literacy that is the product of formal school-based teaching, such as phonics knowledge
    d. an unstable form of literacy that emerges in middle childhood and then disappears in adolescence

3. The phonetic cue reading stage is a stage of reading in which children
    a. use visual cues to read their first 40 words
    b. attend to word-specific spelling information
    c. use the phonetic value of the names of letters as a primitive form of decoding
    d. use letter sound-correspondence to sound out words

4. Invented spelling is
    a. a child's haphazard guess at how to spell that shows no knowledge of letter sound correspondence
    b. a part of the orthographic stage of reading acquisition
    c. systematic, rule-governed, phonetically based spelling created by developing writers
    d. largely based on observing the misspellings of other writers

5. Skilled reading includes:
    a. emergent literacy, vocabulary, and print awareness
    b. gaining meaning from text, phonetic cue reading and orthographic processing
    c. alphabetic principle, fluency and vocabulary knowledge
    d. fluency, identifying printed words, and gaining meaning from text

6. Skilled readers:
    a. have better word identification abilities
    b. are faster readers, because they skip most of the predictable words in text
    c. have better comprehension abilities
    d. all of the above
    e. a and c

7. Readers with more general world knowledge are:
    a. better at decoding unknown words
    b. not considered as skilled as readers with large vocabularies
    c. more fluent in their reading
    d. better at comprehending what they read

8. Phonemic awareness is:
    a. a type of phonological awareness
    b. a metalinguistic skill that is critical for reading
    c. the ability to hear, identify and manipulate the individual sound phonemes in spoken words
    d. all of the above

9. Children can show us that they have the specific skill of **phonemic** awareness by:
    a. segmenting a word into its separate sounds
    b. identifying and making oral rhymes
    c. identifying and working with syllables in spoken words
    d. b and c

10. The Alphabetic Principle includes :
    a. phonics, alphabetic awareness, and fluency
    b. alphabetic awareness, print awareness, and grapheme-phoneme translation
    c. word identification, fluency, and meaning
    d. alphabetic awareness, phonemic awareness and word identification

11. Which of the following is **NOT** true of reading comprehension
    a. readers individual characteristics influence their recall of passage content
    b. readers prior knowledge greatly influences what they recall from a passage
    c. children summarize passages they read automatically
    d. comprehension can be improved by instructing students on how to use specific comprehension strategies

12. The traditional approach to defining reading difficulties
    a. is favored by the majority of researchers.
    b. has been supported by studies of reading ability distributions.
    c. alleviates the problem of arbitrary cutoff points for distinguishing normal readers from those with reading disabilities.
    d. is reflected in current educational policies and special education services.

13. The dimensional approach to reading difficulties
    a. assumes reading skill to be distributed in a statistically normal way along a continuous dimension.
    b. classifies students into diagnosable categories of reading disabilities.
    c. classifies children as reading disabled if there is a discrepancy between their IQ and their reading performance.
    d. all of the above.

14. Which of the following is **NOT** true about how teachers should use their knowledge of the risk factors for children's reading failure?
    a. Teachers should view risk factors as causes of reading failure and should intervene when needed.
    b. Teachers should view risk factors as related to reading failure and not causes of reading failure.
    c. Teachers should check for children with a combination of risk factors as no single risk factor is enough for predicting reading difficulties.
    d. Teachers should use their knowledge of these risk factors to help detect problems early.

15. "I am going to try real hard to remember my homework because I lost points on my grade the last three times I forgot it. I am in jeopardy of getting a "D." What type of motivation does this statement reflect?
    a. intrinsic
    b. extrinsic
    c. learning goals
    d. none of the above

16. Goals that tend to enhance motivation and persistence are
    a. ambiguous, extremely challenging, and long-range.
    b. specific, relatively easy, and short-term.
    c. ambiguous, leave room for interpretation, and teacher imposed.
    d. specific, moderately difficult, and attainable.

17. Which of the following is **NOT** a critical dimension of motivation discussed in class:
    a. collaboration
    b. context
    c. challenge
    d. choice

18. According to the Whole Language approach to reading instruction,
    a. the mechanics of decoding are usually secondary to the goal of obtaining meaning from text.
    b. what children actually read is unimportant.
    c. children should be encouraged to read aloud.
    d. the teaching of phonics should be avoided at all cost.

19. Which of the following is *fundamental* to understanding the alphabetic principle:
    a. phonological/phonemic awareness and knowledge of letter-phoneme correspondence
    b. proficiency in oral language and print awareness
    c. orthographic knowledge and the ability to segment words into syllables
    d. the ability to rhyme and understand alliterations

20. Which of the following is **NOT** a problem with the Reading Recovery literacy interventions?
    a. it is very costly and requires extensive teacher training
    b. one teacher can service only 15-20 children per year
    c. children in the program show no benefit, even while in the program
    d. gains made in the program are short lived if the child is simply returned to their regular classroom instruction

21. The main component(s) of teaching children to read consist of
    a. Phonics
    b. Vocabulary
    c. Text comprehension
    d. All of the above

22. Phonemic awareness is
    a. The same as Phonics
    b. The ability to notice, think about and work with sounds in spoken language
    c. Understanding that there is a predictable relationship between phonemes and graphemes
    d. Understanding the meaning of words

23. A unit of language that can be spoken is:
    a. Consonant blend
    b. Orthography
    c. Syllable
    d. Phonics

24. Semantics refers to:
    a. The sounds of language
    b. The meaning of language
    c. The way words are formed and related to each other
    d. The way words sound when spoken together

25. Morphology refers to:
    a. The sounds of language
    b. The meaning of language
    c. The way words are formed and related to each other
    d. The way words sound when spoken together

26. Phonological awareness does not consist of
    a. Phonemic awareness
    b. Onsets and rimes
    c. Semantics
    d. Rhyming

27. Phonics instruction is defined as:
    a. The teaching of understanding word meanings in language
    b. The teaching of comprehension strategies while reading
    c. The teaching of spellings as they are related to speech sounds
    d. The teaching of rhyming, such as in poetry

TRUE/FALSE QUESTIONS

1. Print awareness is knowledge of letters and their sounds.   True
       False

2. Skillful readers process every letter of every word.   True
       False

3. Skilled readers read with fluency   True
       False

4. Phonological awareness is highly correlated with general   True
       False
   language ability.

5. Fluent reading will always result in text comprehension   True
       False

6. To be a fluent reader one must read quickly, accuracy, and   True
       False
   with expression.

7. The majority of the words children know are learned through   True   False

    direct vocabulary instruction in school.

8. Children's listening comprehension skills are closely related to   True   False

    their reading comprehension skills.

9. Children who receive transitional bilingual education show better   True   False

    English literacy outcomes compared to English-only programs.

10. Studies examining the lexical development of monolingual   True   False

    and bilingual children show that bilingual children have smaller
    total vocabularies than monolingual children

11. A parent of a bilingual child should be concerned about their   True
    False

    child's language development if the child shows evidence of
    code switching.

    .
12. Scores from a criterion- referenced assessment are interpreted   True
    False

    based on performance of other "like" students.

13. A reading instruction method that has no instruction in letter   True   False

    sound correspondence is best for those learning to read English
    because English had no one-to-one letter sound correspondence.

14. Basal reading programs are highly structured reading programs   True   False

    that *often* focus on skills in isolation, and not reading.

15. Classroom training in phonological awareness is all that is   True   False

    needed to prevent all reading difficulties

SHORT ANSWER QUESTIONS

1. **Describe** two ways in which language and literacy skills are related.

   Use the following scenario to answer question Short Answer Question 2:

   You are a teacher and you have a new ESL student in your class with no proficiency in English. There is no one in your school who speaks this child's language.

2. **Describe** the best method for handling this child's language and reading instruction?

3. **List** four factors that you could use as a teacher to identify children in your class at risk for reading failure.

4. **Describe** the three critical dimensions of reading motivation and how they help enhance motivation.

5. What method of reading instruction (whole language or phonics, pick only one) do you prefer? Why? What are the limitations of this method? How would you handle these limitations in your teaching?

6. What are the two main goals for kindergarten teachers to help prevent reading difficulties.

7. What are the two main tasks for second and third grade teachers to help prevent reading difficulties.

Questions 8-11 entail situation a teacher may experience in the classroom. Please answer question a (what aspect of reading does _____ have a problem with?) in each section using only one of the following answers:

1. Alphabetic Principle
2. Phonics
3. Fluency
4. Vocabulary
5. Text Comprehension

8. Jessie is a student in your 2nd grade class. When read to, Jessie is able to answer very basic questions about the text, but she is unable to read even the simplest word. She does, however, know the alphabet.

    a. What aspect of learning to read is Jessie having a problem with?

    b. Is Jessie reading at the appropriate age level?
        1. Yes
        2. No

    c. List all of the strategies you would use to help her?

9. Tony is a student in your 3rd grade classroom. He moved to your school from Japan two years ago and English is his second language. He likes to read non-fiction and science fiction books, but often it takes him a great deal of time to read. He can decode when asked. When asked to read the passage out loud, though, he seems to stumble on most words.

    a. What aspect of learning to read is Tony having a problem with?

    b. Is Tony reading at the appropriate age level?
        1. Yes
        2. No

    c. List all of the strategies you would use to help him?

10. Melvin is a student in your 2nd grade classroom. Melvin does not enjoy reading activities. He is very interested in learning about trains and automobiles, though. When Melvin is reading, he often skips over any and all words he does not know, without even trying to figure them out.

      a. What aspect of learning to read is Melvin having a problem with?

      b. Is Melvin reading at the appropriate age level?
          3. Yes
          4. No

      c. List all of the strategies you would use to help him?

11. Emily is a student in your 3rd grade class. She is a hard worker who likes to read. She enjoys reading a variety of texts, but lately you have noticed that she is having difficulty while reading. She often reads a story, but she cannot answer questions about reading.

      a. What aspect of learning to read is Emily having a problem with?

      b. Is Emily reading at the appropriate age level?
          5. Yes
          6. No

      c. List all of the strategies you would use to help her?

Appendix D

Tutoring Journal EDHD 425

Date: _____

Journal Entry: _____

1.   What was the main (spent the largest amount of time on- just list one) activity you worked on today? (ex. I read Dr. Seuss books to Danny, I showed Danny phonics flash cards, We created words starting with "ph" using magnetic letters.)

2.   Who chose the activity?
      1. Tutor and Tutee together
      2. Child
      3. Tutor
      4. Teacher

3.   List all strategies that you used to teach this activity:

4.   How effective do you feel you were in teaching this reading activity?
      1. Not at all Effective
      2. A little Effective
      3. Somewhat Effective
      4. Quite a bit Effective
      5. Very Effective

5.   What was the secondary (spent the second longest amount of time- just list one) activity you worked on today? (ex.I read Dr. Seuss books to Danny, I showed Danny phonics flash cards, We created words starting with "ph" using magnetic letters.)

6.   Who chose the activity?
        1. Tutor and Tutee together
        2. Child
        3. Tutor
        4. Teacher
7.   List all strategies that you used to teach this activity:

8.   How effective do you feel you were in teaching this reading activity?
        1. Not at all Effective
        2. A little Effective
        3. Somewhat Effective
        4. Quite a bit Effective
        5. Very Effective

Observation Journal EDHD 425
Date: _____
Journal Entry: _____

9.   What was the main (spent the largest amount of time on- just list one) activity did you observe being worked on today? (ex. The teacher read Dr. Seuss books to Danny, The teacher showed Danny phonics flash cards, They created words starting with "ph" using magnetic letters.)

10.   Who chose the activity?
        1. Tutor and Tutee together
        2. Child
        3. Tutor
        4. Teacher

11.   List all strategies that you would use to teach this activity:

12.   How effective do you feel you would be in teaching this reading activity?
        6. Not at all Effective
        7. A little Effective
        8. Somewhat Effective
        9. Quite a bit Effective
        10. Very Effective

13. What was the secondary (spent the second longest amount of time- just list one) activity you observed today? (ex.The teacher read Dr. Seuss books to Danny, The teacher showed Danny phonics flash cards, They created words starting with "ph" using magnetic letters.)

14. Who chose the activity?
   1. Tutor and Tutee together
   2. Child
   3. Tutor
   4. Teacher

15. List all strategies that you would use to teach this activity:

16. How effective do you feel you would be in teaching this reading activity?
   1. Not at all Effective
   2. A little Effective
   3. Somewhat Effective
   4. Quite a bit Effective
   5. Very Effective

Appendix E

Interview Questions

1. I want to discuss the changes in your confidence about teaching reading that you showed from the beginning of this course to the end? First of all, do those changes surprise you or were they what you expected might happen? What do you think contributed the most to those changes?

2. We just talked about the changes in your confidence about teaching reading, I also want to ask about the changes you reported in your understanding of reading. How do these reported changes from the beginning to the end of this course fit with your expectations? What do you think contributed the most to those changes?

3. As part of this course you were asked to tutor (observe) in a classroom. Would you recommend that this component of the course be maintained? In what ways did this component influence your confidence about teaching reading? In what ways did this component contribute to your understanding of reading?

Appendix F

Criteria for Strategy

Strategies Used and Counted
    Letter identification
    Phoneme isolation
    Phoneme identity
    Phoneme segmentation
    Phoneme substitution
    Phoneme addition
    Phoneme deletion
    Letter sound correspondence
    Rhymes
    Onset-rimes
    Use of syllables (break-down words, chunking, sounding out)
    Conversations about vocabulary
    Use of prior knowledge (vocabulary or comprehension)
    Comprehension clues (Using a sentence to figure out the word, either from the book or an example the tutor gives)
    Use of word parts (suffixes, prefixes, base words)
    Use of pictures
    Summarizing
    Questioning
    Predicting

Appendix G

Sample Interview

Interview One

In.- I want to discuss the changes in your confidence about teaching reading you showed from the beginning of this course to the end. First of all, do these changes surprise you or were they what you expected might happen?

P1- They are what I expected, I mean, going into the reading thing I had taught children, I had substitute taught, but I had never focused on reading and I think I was anxious about it. But ummm.... I think the changes are accurate.

In- OK, you went up in efficacy. First of all, what do you think contributed the most to this upward change?

P1- Umm. Not only tutoring the child, but also what we were learning in class and being able to see those changes that a child goes through when they are learning to read and the different strategies that help that and being able to do that. Working with the child and seeing whether it worked or not.

In- OK, so do you think the tutoring helped more or actual class instruction helped more?

P1- I don't know. It is kinda split in between. Like, I do not know what I would do if I was tutoring and not taken that class. I feel like I would probably not have much structure in how I was doing it. And then the class helped a lot, too.

In- Good. We just talked about the changes in your confidence about teaching reading, I also want to talk about the changes you reported in your understanding of reading. How do these reported changes from the beginning to the end of the course fit with your expectations? You went up a great amount.

P1- Umm. Well, we all learned to read, but I do not think we ever really know how we learn to read when I think back on it, and so that is what I think I learned the most was how children go through it and I really think it is significant. Definitely when I took the pre-test I had no ideas to the answers- I was like I have no idea. Then on like the final exam I was really confident about it.

In- So not at all that surprised.

P1- Nope.

In- OK, And umm... what do you think contributed the most to the changes in your understanding of the material?

P1- The class.

In- The classroom. Ok good, thank you. As part of the class you were asked to tutor in a classroom. Would you recommend that this component of the course be maintained?

P1- Yes.
In- In what ways did this component influence your confidence about teaching reading?

P1- Well, like I said before, like using what we learned and being able to apply that, I think that is what helped a lot. I really don't think I can walk into the classroom just finishing the course like I will know how to do certain things. I will know how to deal with children with reading. I am glad I took the course, I mean the tutoring, so that I do have that field experience.

In- Great, in what ways did this component contribute to your understanding of reading? Being the understanding of the content of the course.

P1- The tutoring?

In- Yes.

P1- Umm. I don't think just tutoring would have been enough or just the class. I mean tutoring contributed some because I had to deal with a child that was in kindergarten and I had really never dealt with children in kindergarten when I substitute teached or, you know, volunteered at the schools. So, like that definitely helped me with their stage of development. But I feel like if I had had different children I would have learned different things and stuff.

In.- Great. Thank you so much.

P1- You're welcome.

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