2-1-2010

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Learning to Teach: The Influence of a University-School Partnership Project on Pre-Service Elementary Teachers' Efficacy for Literacy Instruction

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Abstract

Bandura's (1986) theory of self-efficacy suggests that efficacy may be most malleable early in learning; therefore, some of the most powerful influences on the development of teachers' sense of efficacy may be the experience of teaching during field placements and student teaching. Unfortunately, pre-service teachers may not be exposed to good role models for teaching during field placements. This article describes a qualitative study of the influence of vicarious experiences modeled by a teacher educator and master teachers on the development of pre-service teachers' sense of efficacy for literacy instruction. Results indicate that the vicarious experiences positively influenced pre-service teachers' efficacy for effective literacy instruction that was maintained through student teaching.

The role of the teacher is critical in ensuring that children are successful readers. But for some children, reading acquisition will be easy while others will find it difficult. Either way, all children have a right to well-prepared teachers who provide reading instruction that meets their individual needs (International Reading Association, 2000).

According to a synthesis of research on teacher preparation for reading instruction, newly graduated classroom teachers entering the field should have the following content knowledge: conceptual understandings about the foundations of language development; proficiency with formal and informal assessment tools to

determine readers' reading strengths and weaknesses; and expertise with instructional strategies and materials for readers of all backgrounds and abilities (International Reading Association, 2007). The report indicates that teacher preparation programs that provide this content knowledge will produce teachers who are better prepared to teach reading well. However, a college degree and content knowledge does not necessarily equate to a highly effective literacy teacher as having the necessary knowledge and skills to perform a task does not ensure that the task will be performed successfully (Bandura, 1986). What is often overlooked is the interaction between teachers' skills and knowledge and their beliefs. A teachers' sense of efficacy may determine how much motivation, effort, and persistence they put into this process.

Bandura's (1986) theory of self-efficacy suggests that efficacy may be most malleable early in learning; therefore, some of the most powerful influences on the development of teachers' sense of efficacy for literacy instruction may be the experience of teaching during pre-service field placements and student teaching. Unfortunately, pre-service teachers are often exposed to poor role models for teaching literacy during field placements (Britzman, 2003; Donovan, 1999; Maloch, Fine, & Flint, 2003; Moore, 2003). Consequently, knowing that self-efficacy beliefs are so central to intentional action, the early formation of positive self-efficacy cannot be left to chance.

Vicarious experiences in the form of observations and cognitive modeling by teacher educators and master teachers can positively influence the self-efficacy of pre-service teachers (Henson, 2001; Labone, 2004). However, there is little research linking the process of learning to teach reading with a pre-service teacher's efficacy beliefs. This article describes a study of the influence of vicarious experiences on the development of pre-service teachers' sense of efficacy for literacy instruction.

Teachers' Sense of Efficacy

Research has found efficacy to have powerful effects on teacher behaviors. Efficacious teachers are resourceful, cause-and-effect thinkers who persist when things do not go smoothly and persevere in the face of setbacks (Bandura, 1993; Guskey, 1988). They more effectively plan and organize for instruction and implement innovation to meet the needs of their students (Allinder, 1994; Guskey, 1988; Stein & Wang, 1988). Efficacious teachers are also optimistic, confident, and enthusiastic about teaching and are committed to stay in the profession (Allinder, 1994; Coladarci, 1992; Evans & Tribble, 1986; Glickman & Tamashiro, 1982; Guskey, 1984; Hall, Burley, Villeme, & Brockmeier, 1992). Teachers with a higher sense of efficacy

also impact student learning by using more positive classroom management strategies (Emmer, 1990), by working longer with students who are struggling (Gibson & Dembo, 1984), by being less critical of students when they make errors (Ashton & Webb, 1986), and are less likely to refer a struggling student to special education (Meijer & Foster, 1988; Podell & Soodak, 1993). Teachers' sense of efficacy has also been related to important student outcomes such as student achievement (Armor, Conroy-Oseguera, Cox, King, McDonell, Pascal, Pauly, & Zellman, 1976; Ashton & Webb, 1986; Moore & Esselman, 1992; Ross, 1992), student motivation (Midgley, Feldlaufer, & Eccles, 1989), and students' own sense of efficacy (Anderson, Greene, & Loewen, 1988).

Given the obvious importance of teachers' sense of efficacy for optimal motivation in teaching, it makes sense that the formation of positive self-efficacy beliefs would be critical during teacher preparation and student teaching experiences. However, teacher efficacy is context and subject-matter specific. Research has shown that beginning teachers with a high sense of efficacy, as measured by a general teaching efficacy scale, rated the quality of their preparation higher than those who were less efficacious (Burley, Hall, Villeme, & Brockmeier, 1991; Hall, et al., 1992). But, research on beginning teachers with a high sense of efficacy for literacy, as measured by a scale specific to teaching literacy, did not rate the quality of their preparation as significant (Tschannan-Moran & Johnson, n.d.). Unfortunately, pre-service teachers in elementary education are exposed to varying contexts and teaching practices in practicum or field placements the quality of which teacher educators may or may not be aware. It is of utmost importance to understand the mediating role teacher educators and significant others (i.e. mentor or supervising teachers) can play to promote teacher efficacy within specific content areas.

The Development of Efficacy

According to Bandura (1997), the major influences on efficacy beliefs are the attributional analysis, or the different ways in which people explain and interpret the four sources of information about efficacy — mastery experience, vicarious experiences, verbal persuasion, and physiological arousal — within a specific context. The most powerful source of efficacy information comes from mastery experiences or hands-on teaching opportunities in classrooms with students. Additionally, a teacher's biases contribute to self-efficacy beliefs (Bandura, 1997). Efficacy is boosted if a successful teaching performance is attributed to internal or controllable causes such as ability or effort, whereas efficacy may be weakened if success is attributed

to luck or the intervention of others (Bandura, 1993; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

Vicarious experiences are those in which the target activity such as a particular instructional strategy is modeled by someone else. The impact of the model on the observer's efficacy depends on the degree to which the observer identifies with the model (Bandura, 1977). For example, the impact will be stronger the more closely the observer identifies with the model. Social persuasion may entail a pep talk or specific performance feedback from a supervisor or a colleague, or it may involve the general chatter in the teachers' lounge or in the media about the ability of teachers to influence students. Ultimately, the potency of persuasion depends on the credibility, trustworthiness, and expertise of the persuader (Bandura, 1986). According to Tschannen-Moran, et al. (1998), "a teacher's sense of efficacy is determined by his or her self-perception of personal teaching competence in light of the assumed requirements of an anticipated teaching task" (p. 231) (see Figure 1). The standards the teacher holds for what constitutes good teaching will influence how these two factors are weighed.
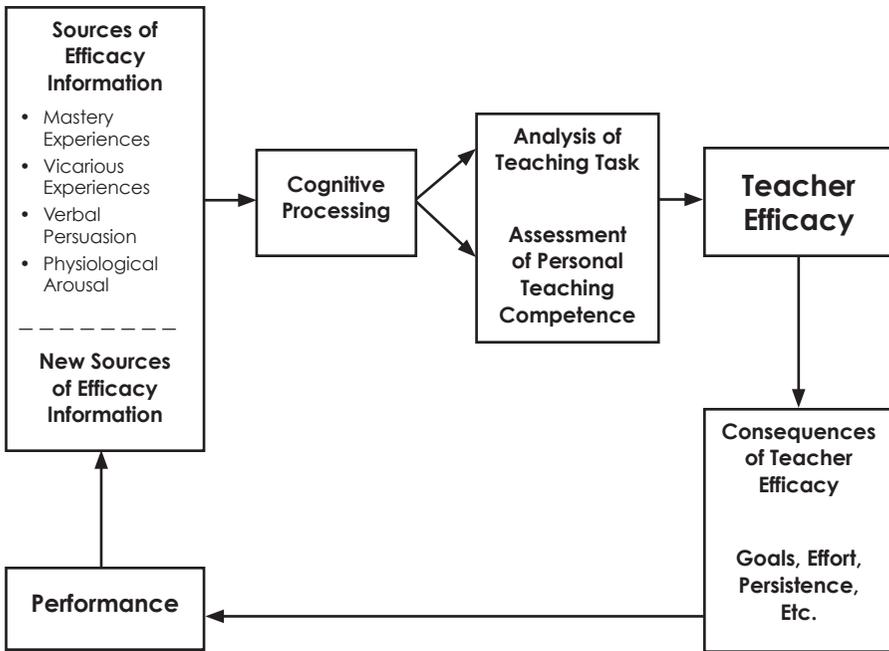

Figure 1. Teacher Sense of Efficacy Model (Tschannen-Moran, et al., 1998)

Vicarious Experiences and Cognitive Modeling

Tschannen-Moran's, et al., (1998) integrated model (Figure 1) holds much promise for the preparation of teachers in that it highlights the situational and developmental nature of the teaching task analysis which is more salient in shaping efficacy beliefs when teachers lack experience or when tasks are new. Vicarious experiences in the form of observation and cognitive modeling may be an effective way for teacher educators to influence both the situational and developmental nature of the teaching task in a particular content area. Gorrell and Capron (1990) describe cognitive modeling as a type of "think aloud" in which learners are exposed to the teachers' way of thinking and frame of reference. Thus, students may adopt the teacher's reasoning strategies more readily. They found that cognitive modeling with pre-service teachers enrolled in an educational psychology course increased their self-efficacy beliefs significantly more than when exposed to direct instruction (Gorrell & Capron, 1990). Yet, little research exists on the influence of cognitive modeling on the preparation of pre-service teachers, especially within particular methods courses such as literacy.

The challenge to teacher educators is to create different conditions for pre-service teachers' thinking and learning by providing contexts that support an ongoing dialogue between cognitive processing of new sources of efficacy such as classroom teaching experiences (mastery experiences); observations, modeling, and simulations (vicarious experiences); university lectures, coursework, and feedback (verbal persuasion); and the excitement, anxiety, or fear (physiological arousal) associated with specific experiences. Cognitive modeling may also be an effective conduit for transmitting new knowledge and for mediating the influence of other sources of knowledge. The context in which this dialogue takes place is critical. Evidence suggests that context variables such as the level of collaboration and support have been linked to higher efficacy among teachers, especially novice teachers (Chester & Beaudin, 1996; Rosenholtz, 1989; Tschannen-Moran & Woolfolk Hoy, 2007). However, most teacher efficacy research has not adequately considered context.

Contexts that Support the Development of Efficacy in Teacher Preparation

Educators of pre-service teachers acknowledge that teaching is a decision-making process involving systematic observation, in-depth analysis, hypothesis testing, and self-evaluation (Lyons, Pinnell, & DeFord, 1993). Through collaborative conversation, teachers become active in the knowledge-building process. In a study

on literacy professionals' perspectives on current trends in literacy teaching and learning, respondents (K-12 teachers, reading specialists, administrators, library-media specialists, and teacher educators in the U.S.) indicated that they believe teacher preparation should be a collaborative enterprise among the student teacher, mentor teacher, and university supervisor (Commeyras & DeGroff, 1998). The overwhelming majority of respondents indicated that participation in this experience positively influenced their teaching practices.

A study conducted by The International Reading Association (IRA) also found a strong sense of efficacy to be a key theme among first-year teachers who "exemplified responsive and mindful teaching" (Maloch, Fine, & Flint, 2003, p. 349). The study followed 101 novice teachers through their first year of teaching to explore differences in understandings, beliefs, and decision making. These beginning teachers graduated from three types of four-year, undergraduate programs of excellence in reading teacher preparation: reading specialist programs, reading embedded programs, and general education programs. Findings from the study indicated that teachers who graduated from reading specialist and reading embedded programs were more willing to "teach against the grain" in order to meet students' literacy needs and achieve their own vision of literacy development and instruction than the majority of other beginning teachers in the study (Maloch, et al., 2003, p. 451). It appeared that first-year teachers' efficacy for decision making was increased in programs that required more coursework and more field experiences in reading than first-year teachers who did not graduate from such programs. They also found that there was a significant effort on the part of the teacher educators in the reading specialization and reading embedded programs to coordinate and carefully supervise the varied apprenticeship opportunities provided for the students in their programs. They concluded that it was the "carefully supervised apprenticeship experiences whereby students and 'master teachers' engage in reflective dialogue" that made the difference, not necessarily the number of hours of coursework or field experiences (Maloch, et al., 2003, p. 451).

However, only a small number of the teacher preparation institutions have the type of partnerships with schools that afford such careful placement and supervision by teacher educators. In an analysis of empirical studies examining the impact of teacher characteristics on teacher effectiveness, Rice (2003) found that "field experiences tend to be disconnected from the other components of teacher education programs, leaving teachers poorly equipped to apply their knowledge from classroom coursework to teaching in the field" (p. 38). The pervasive practice

of random placement of pre-service teachers in field placements leaves to chance the collaborative enterprise that is so critical for pre-service education. Pre-service teachers may not observe best practices in literacy instruction learned in their college coursework and they therefore cannot share a common experience when observing a classroom teacher. This may prohibit the process of ongoing dialogue, reflective inquiry, and the exchange of ideas that allows for the development of efficacy beliefs. Research suggests that many times what pre-service teachers have learned in the college classroom takes a back seat to what they perceive as reality in their field placement unless their university coursework makes a direct attempt to address this disconnect (Britzman, 2003; Duffy & Atkinson, 2001; Grisham, 2000; Hamman, Button, Olivarez, Lesley, Chan, Griffity, & Woods, 2006; Labbo & Reinking, 2000; Lesley, et al, 2004; Moore, 2003; Weinstein, 1988).

In order to facilitate efficacious learning, faculty members in programs with a limited number of reading courses and field practica must work within the limited resources and constraints imposed by local schools, universities, and states. They must also find powerful ways to integrate course work and field experiences that allow pre-service teachers to build cognitive guides for efficient analytical thinking under varying circumstances, promote a sense of community, and prepare them for instructional decision making and reflective practice.

Social cognitive theory (Bandura, 1986; 1997) proposes that personal factors such as cognitive processes and behavior interact with the environment to influence each other through a process of reciprocal determinism. The purpose of this article is to describe a study of an innovative project that employed the knowledge-of-practice approach with pre-service teachers. How pre-service teachers process and internalize vicarious experiences and what characteristics of models best facilitate the development of self-efficacy beliefs are important issues that this study begins to address.

Method

Participants

The sample for this study was 25 pre-service teachers in two sections of the same reading methods course in Fall 2006. Fifteen of the pre-service teachers were graduate students in an initial certification program and 10 were undergraduate students. Twenty-two (88%) were female, and all but four (84%) were in their early twenties. All 25 pre-service teachers had completed the first semester of required courses, which included educational psychology, social foundations, and research

methods. The first semester also included a 10-hour field practicum in which the pre-service teachers were first introduced to their field placement (where they remain throughout their coursework and student teaching) and were only required to observe and document the classroom environment, students, and cooperating teacher. Consequently, upon entering the reading methods course the second semester, the pre-service teachers had no mastery experiences and minimal vicarious experiences.

Description of Reading Methods Course and Observations Made During Practicum

The study took place at a university in the southeast United States with 25 students enrolled in the only required four-credit hour reading methods course that was part of a National Council for Accreditation of Teacher Education (NCATE) approved program designed to prepare elementary teachers for PreK-6. All students in this program must have dual concentrations, one in another discipline and one in elementary education. The course emphasized a constructivist theoretical orientation and focused on an apprenticeship approach to assisting children with achieving reading independence highlighting the role of the adult in supporting children's developing control of literacy knowledge. According to Dorn, French, & Jones (1998), "In this model, the teacher provides clear demonstrations, engages children appropriately, monitors their level of understanding, makes necessary accommodations to ensure they are successful, and withdraws support as they exhibit greater control" (p. 15). The instructional framework presented to perspective teachers was grounded in best practices that included reading aloud, shared, guided, and independent reading, comprehension, language and word study, assisted and independent writing, genre study, reading and writing workshop, and content literacy (Dorn, et al., 1998; Fountas & Pinnell, 1996; Fountas & Pinnell, 2001; Lyons & Pinnell, 2001). In this context, the course instructor provided verbal and vicarious experiences by modeling literacy strategies and providing hands-on experiences and opportunities for discussion and reflection.

The course was accompanied by a one-credit hour practicum of 20 field hours. As stated previously, students had been placed in practicum settings in their first semester to observe instruction and remained in that classroom throughout the program and student teaching. For most of the pre-service teachers, the cooperating teacher was the only teacher they observed throughout their undergraduate experience. The 25 pre-service teachers in this study were randomly placed in eight elementary schools within four school districts.

Although the opportunity to observe teaching could be a source of self-efficacy belief development, documentation of instruction observed by the pre-service teachers indicated that much of the literacy instruction conducted in these classrooms was not consistent with the best practices they were learning in their reading methods course. For example, over the course of the semester students were required to observe and document three literacy lessons in reading, writing, and word study/spelling. An analysis of the 75 lessons they documented (45 lessons observed in grades K-2 and 30 lessons observed in grades 3-5), indicated that they observed only whole group or ability grouping. They also observed the predominate use of basal reading series, oral round robin reading, worksheets for independent practice, teacher driven writing prompts, direct instruction, and isolated skills instruction. Class discussions throughout the semester supported the observational documentation indicating that the majority of instruction by the cooperating teachers was teacher centered and materials driven. This produced a potentially confounding effect on the development of efficacy beliefs of these pre-service teachers since the reading methods course promoted student centered instruction and positioned the teacher as decision maker.

The professor tried to provide opportunities for the pre-service teachers to gain mastery experiences in their field placements that would be consistent with their university instruction by requiring them to 1) administer authentic assessments and to use the results to inform and guide instruction through case studies; 2) videotape themselves conducting a guided reading lesson; and 3) conduct a writing activity and a read aloud activity and then reflect on those experiences with their cooperating teachers and peers. However, since most of the cooperating teachers did not adhere to a similar theory or instructional practices as the professor, the situation prohibited the process of continual, reflective inquiry and the exchange of ideas between the pre-service and cooperating teachers that would support the development of efficacy beliefs. As a result of this discrepancy, in order to create an environment in which strong efficacy beliefs could be developed, the professor needed to create a context in which conditions for the pre-service teachers' thinking and learning could be bolstered by sharing common experiences observing classroom teachers using literacy strategies they had learned about in the reading methods course. The resulting project is described in the next sections.

Procedures

This study involved 25 pre-service teachers, one university professor, and three elementary teachers participating in Teacher Swaps and Teacher Visits, all

designed to provide the necessary elements for developing strong efficacy beliefs about literacy instruction.

Teacher Swap

The Teacher Swap involved the professor trading teaching roles with each of three elementary teachers at a local public elementary school over the course of the semester. This was done to allow the teachers classroom coverage so they would be free to teach the professor's literacy course. The three teachers (all names are pseudonyms) who participated in the teacher swap varied in ages and teaching experience and all taught at Maple Ridge Elementary School. Miss Voss was in her late 20s and had been teaching third grade for six years. Mrs. Clough was in her mid 50s, taught fifth grade, and had taught various elementary grades for 20 years. Mrs. Hayes was in her mid 50s, taught first grade, and had taught various elementary grades for 13 years. They all shared a common constructivist philosophy of literacy instruction, consistent with that of the reading methods course, which is built on an apprenticeship process and is structured around a reading/writing workshop organizational framework. Most other teachers at the school held this philosophy so that the school culture seemed to also support literacy instruction.

The purpose of "swapping" classrooms was to provide the pre-service teachers an opportunity to engage in dialogue with and instruction by practicing teachers as well as a discussion of an elementary classroom model of effective literacy instruction consistent with what they were learning in the university classroom. Although the teacher swap would not provide mastery experiences, research has shown that other sources of self-efficacy such as verbal persuasion, vicarious experiences, emotional arousal, and contextual factors seem to be more salient for pre-service and novice teachers (Tschannen-Moran & Woolfolk Hoy, 2007). Therefore, credible sources such as elementary teachers who put into practice the instructional strategies taught in the university class could provide a context for building these sources of efficacy through a knowledge-of-practice approach.

Prior to the beginning of the semester, the three teachers and the professor met to plan the best way for the classroom teachers to provide cognitive modeling and collaborative dialogue with the pre-service teachers. Examples included the classroom teachers bringing videotapes showing their literacy instruction, student interactions, and the classroom environment; modeling and demonstrating instructional strategies; bringing materials such as children's literature, students' reading journals, and charts; and bringing handouts such as a copy of reading/writing workshop planning and conference sheets and daily schedules.

For each Teacher Swap, the professor began by observing the elementary classroom for approximately four weeks to become familiar with the classroom routine, environment, and children. When they "swapped" classrooms for a day, the professor taught the elementary students and the teachers went to the university and taught the pre-service teachers during their regularly scheduled reading methods course. On the day of each teacher swap, the teachers and the professors swapped classes with the professor teaching the elementary classes and the teachers sharing their "local knowledge" including daily routines, management practices, decision-making processes, materials, and how they help their students to meet state curriculum standards and testing requirements with the pre-service teachers. The elementary teachers provided cognitive modeling of instructional techniques and management strategies while also giving them an avenue for cognitive processing of new sources of efficacy and for mediating the influence of other sources of knowledge. The day after each Teacher Swap, the elementary teacher and professor met for a half-day to debrief their experiences and provide feedback on the project.

Maple Ridge Elementary Teacher Visits

The Teacher Visits involved all 25 pre-service teachers visiting Maple Ridge Elementary School which opened in 2000 and is home to over 600 hundred students grades K through five with an additional facility for preschoolers on site. This suburban school's student body draws from low to middle socioeconomic households with 23% of students receiving free or reduced lunch. The student make-up of the school consists of the following: 79% Caucasian, 18% African American, 1% Hispanic, and less than 1% of Asian or American Indian.

After the first Teacher Swap with Mrs. Hayes, the pre-service teachers spent one day observing literacy instruction in the first-, third-, and fifth-grade classrooms of the participating teachers. During these visits, the pre-service teachers observed different instructional strategies within a reading/writing workshop framework. Following each classroom visit, they debriefed for approximately 15 minutes with each of the classroom teachers observed. This debriefing allowed the pre-service teachers to ask questions and make comments on specific strategies used by the teacher or students. The classroom teachers also had an opportunity to expand on the instructional and managerial strategies that they used in their daily practices.

Data Description and Collection

For this study, the interpretivist paradigm in which researchers watch, listen, ask, record, and examine to develop a reflective understanding of a specific

context or phenomenon was used (Schwandt, 1994). The researcher wanted to see how the participants interpreted similar teacher swap experiences and identified, understood, and described commonalities and differences amongst these interpretations. Particularly, the researcher wanted to understand how the teacher swap project influenced the pre-service teachers' perceived efficacy for decision making in literacy instruction. The development of patterns, relationships of meanings, and clusters of themes were common to many of the participants' descriptions in interviews, reflections, and observations and strongly supported the narrative.

Interviews. At the beginning of the study, data were generated in the form of twelve interviews (see Table 1) with seven pre-service graduate and five pre-service undergraduate participants, all who volunteered for the individual interviews. To sample the pre-service teachers' perceptions at different times within the duration of the swap, four interviews took place after each Teacher Swap. Member checking, use of participant voice, and open-ended interviewing were used. While participants answered predetermined questions during the interviews, the researchers asked follow-up questions based on their answers. After the 12 student interviews were conducted, they were immediately transcribed and organized for data analysis. Participants were provided transcripts of their interviews via e-mail and asked to reply back to the researchers either confirming or disconfirming their statements.

Table 1. *Interview Questions*

1. What, if anything, did the teacher swap help you learn/understand that other aspects of the course/practicum did not?

2. What, if any, topics discussed during the teacher swap were most important to you as a future teacher?

3. What, if any, are questions you would still like to have answered by the elementary teachers in the swap?

4. What, if anything, would you change about the teacher swap project?

5. Would you recommend that this project continue to be implemented in the future? Why or why not?

Reflections. In addition to the 12 interviews, other sets of data were generated from the Teacher Swap experience as in all of the reading classes, several reflective assignments were given to document the students' experiences with the teachers and visiting the school. The students were asked to write a reflection after each Teacher

Swap for a total of 100 reflective documents all of which were included in the data analysis as a means of gauging patterns of reaction and perception about the Teacher Swap experience from all of the student participants. The more in-depth information obtained in the interviews was generated with a sample of approximately half of the swap participants due to time constraints.

Essays. Pre-service teachers were also asked to respond to seven additional essay questions (See Table 2) before and after student teaching. These questions allowed them to reflect on the positive or negative effects the four sources of efficacy (mastery experiences, vicarious experiences, social persuasion, and psychological arousal) had on their beliefs that they could effectively implement effective literacy instructional practices in their future classrooms. Responses were open-ended, allowing the pre-service teachers to expand on their thoughts and beliefs as much as they wanted.

Table 2. *Essay Questions*

The questions below apply to class activities/observations, field placement activities/observations, and the Teacher Swap presentations/observations.

Mastery Experiences:
What teaching experiences have you participated in this semester that you believe have had the most positive impact on your ability to implement effective literacy instructional practices in your future classroom to meet the needs of all students?

What teaching experiences have you participated in this semester that you believe have had the most negative impact on your ability to implement effective literacy instructional practices in your future classroom to meet the needs of all students?

Vicarious Experiences:
What observations of teaching practices have had the most positive effect on your belief that you can effectively implement effective literacy instructional practices in your classroom to meet the needs of all students?

What observations of teaching practices have had the most negative effect on your belief that you can effectively implement effective literacy instructional practices in your classroom to meet the needs of all students?

Verbal Persuasion:
What information/presentations have had the most positive effect on your belief that you can effectively implement effective literacy instructional practices in your classroom to meet the needs of all students?

What information/presentations have had the most negative effect on your belief that you can effectively implement effective literacy instructional practices in your classroom to meet the needs of all students?

Physiological and Emotional states:
How do you feel about your ability to implement effective literacy instructional practices in your classroom to meet the needs of all students?

Data Analysis

Open and axial coding were used by the researcher and a research assistant to examine the data that emerged from the interviews. Whenever possible, interviewees' own words were used in the code labels. This was to ensure that the code reflected the interviewees' intended meaning as much as possible. The open codes were grouped into 29 categories and interpreted in light of the study's overall focus on teacher efficacy to provide a rich description of the experiences of participating pre-service teachers (see Table 3).

Table 3. *Emerging Axial Codes*

Role of professor in class
Comments on observations/learning about children as readers/writers
Comments on college class and professor
Comments on specific aspects of reading strategies
Teachers as role models/experts
Questions about teaching children
Role of professor in facilitating swap
Insights/realizations brought about by swap
Comments on teachers' presentation modes
Program issues
Comments on teachers' style/philosophy
Desire to see swap teachers teach other subjects
Connection between class and swap
Swap implementation in the future
Comments on teachers' class environment
Desire to continue relationship with teachers
Comments on classroom management
Desire to learn more
Practical teaching advice/Insights for first year of teaching
Positive affirmations about the swap
Seeing is believing
Confidence in ability to teach
Hands on experience
Expression of lack of confidence/concerns about teaching
Differences between swap school/teachers and practicum placement school/teachers
Comments on implementation of teaching strategies/philosophies
Swap provided opportunities to learn about different grade levels
General comments about reading workshop
Comments on school visit and observations

The researchers resolved any differences between their lists of axial codes by looking at each axial code and its corresponding open codes, discussing individual interpretations of the axial codes, and mutually agreeing upon the specific axial codes that would be used for the study. With the axial codes defined from analysis of the interview data, the four different reflective documents (one on each of the three elementary teachers and one of the school visit) and all of the essays that each student created were then coded holistically. After completing holistic coding, the resulting frequencies were used as another way to inform the study's findings as they evolved and became more apparent.

Qualitative data and interpretations underwent peer debriefing with an expert in qualitative research to facilitate internal validity. After careful examination of these categories and their contents, the following thematic trends emerged (Lincoln & Guba, 1985): teacher credibility, trustworthiness, and expertise; teacher presentation modes; practical information; and seeing is believing. Salient points from each themes and representative samples of data are outlined below.

Results

As stated previously, the purpose of the Teacher Swap project was to employ a knowledge-of-practice approach with pre-service teachers in an effort to influence their beliefs toward a decision making process of literacy instruction. The results of the data analysis reveal that the vicarious experiences provided through the teacher swap project positively influenced pre-service teachers' self-efficacy for literacy instruction.

Cognitive Processing and Internalizing Vicarious Experiences

Even though all four sources of efficacy play roles in the development of efficacy beliefs, it is how an individual interprets the information that is critical. "Cognitive processing determines how the sources of information will be weighed and how they will influence the analysis of the teaching task and the assessment of personal teaching competence" (Tschannen-Moran, et al., 1998, p. 230). When teachers make self-efficacy judgments, they weigh their self-perceptions of personal teaching competence *in light of* the assumed requirements of the anticipated teaching task (Tschannen-Moran, et al., 1998).

The data collected in this study indicate that students were able to use the information they gained from the vicarious experiences in the Teacher Swap project

to begin analyzing the task of implementing effective literacy practices in their future classrooms and to assess their personal teaching competence. One student stated, "You have to teach the children slowly but surely how to do reading workshop...you are not a bad teacher if it takes two months to get into the groove of reading workshop. It's going to be better in the long run." Another pre-service teacher asserted,

> I feel confident about implementing effective reading strategies in my classroom as a first year teacher because I have the theoretical background I need from class, I have observed excellent models at Maple Ridge, and I have participated in three presentation/discussions on the practical, nitty-gritty aspects with these teachers. I plan to teach in a school that supports this kind of teaching.

Additionally, a student remarked, "If there are teachers in the school doing these things and the materials available, I think I could implement them. I think I might be a little slower getting going than experienced teachers. But I could do it!"

These responses are representative of positive self efficacy judgments by the pre-service teachers which clearly indicate that they were weighing their capability to implement effective literacy practices in light of the requirements of school context and resources. The bolstering of vicarious experiences in this study may have made this process more salient for these pre-service teachers. But the question remained, was this heightened sense of self-efficacy temporary, or would it endure when the pre-service teachers entered student teaching and the source of vicarious experiences provided during the teacher swap project were no longer available?

Evidence of Teacher Efficacy from Student Teaching Experiences

Upon completion of the student teaching semester, the pre-service teachers were asked to respond to seven essay questions (see Table 2). These essays provided evidence of the influence of the students' increased efficacy on the goals, effort, and persistence during their student teaching experience. One student responded,

> I think most of the observations during my student teaching experience were really negative overall, but they didn't affect my belief that I can implement effective practices in my classroom. In fact, it only made me more convinced that I needed to find a job at a school where I would be able to use the effective practices I had learned and observed in the Teacher Swap project.

Another student wrote, "I have seen plenty of examples of poor literacy instruction, but these do not affect my belief that I can be effective in teaching literacy." Additionally, another student noted, "The experience really made me think about what I want next year in my own classroom—I definitely want to use reading workshop and guided reading groups. I think that these strategies would better meet the needs of all of the students."

Increased goal setting, effort, and persistence leads to better performance. Data from the essay questions provided information on students' performances during student teaching or plans for future teaching that were indicative of the influence the teacher swap. One student stated, "I was able to edit with each student individually, once a week, during my student teaching practicum…it helped me become comfortable assessing the needs of individual students and talk to them about those needs." Another student indicated, "I implemented guided reading in my kindergarten classroom. It was a wonderful experience for me." A third student wrote, "I used anecdotal records from my reading conferences to informally assess my students' fluency, and more importantly comprehension."

Considering that these practices did not take place in the classrooms in which they had observed prior to these pre-service teachers entering their student teaching, it is apparent that the Teacher Swap provided these students with cognitive structures to guide and motivate them in the pursuit of teacher decision making and effective literacy practices even when faced with challenging tasks and contexts through student teaching. Therefore, it is important to consider the features of the Teacher Swap project that significantly influenced the pre-service teachers self efficacy beliefs.

Characteristics of Vicarious Experiences that Facilitated the Development of Self Efficacy Beliefs

Throughout the Teacher Swap project, what the students attended to, remembered, and considered important or credible impacted the influence the experience had on their efficacy beliefs. From the data analysis, the following characteristics of the vicarious experiences provided through the Teacher Swap project are believed to have facilitated the development of these pre-service teachers' self efficacy beliefs described above.

Credibility. One of the themes that emerged from the data was that the pre-service teachers found the elementary teachers in the teacher swap to be credible. This is important, since research has shown that the impact of the model on the

observer's efficacy depends on the credibility, trustworthiness, and expertise of the model (Bandura, 1997). For example, in a reflection on Mrs. Hayes's visit, one student stated,

> She was very knowledgeable about the psychological bases for many instructional strategies that she uses. It gave her that much more credibility; not only as having just great skills with children and learning, but knowing why she does the things she does scientifically.

The degree to which the observer identifies with the model is also important. Both performance (ability) and attribute (age and gender) similarities of models contribute to the development of positive teacher efficacy beliefs. All the teachers were female, which was consistent with a majority of the pre-service teachers but, only Miss Voss was close to their age. This attribute was reflected in one student's comment, "One of the things that stands out in my mind is Miss Voss. She looks young. She was very enthusiastic and she was a role model." According to Bandura (1997), models that are perceived by the observer to be competent are more likely to positively influence the efficacy of the observer regardless of perceived dissimilaries in personal attributes. Therefore, as indicated by the first student's comment, the teachers' competence had a far greater influence on the students than personal attributes.

Presentation modes. The modes in which the teachers presented information also emerged as an important aspect of the vicarious experiences. The most salient mode was cognitive modeling which was done in two ways - by actually modeling a teaching strategy and while watching a video of themselves teaching. One student commented, "I think what was really beneficial was having the teachers come in and give their commentary on the videos. In real life experiences, you can't stop and comment on the strategies that are being used in the classroom." A second student remarked, "Observing what we are discussing in our class actually working in the classroom makes it much more realistic. We are much more likely to use methods we have had a chance to see in action."

In complex activities, the verbalized thinking skills that guide actions are generally more informative than the modeled actions themselves (Bandura, 1997). Planning, reflecting, problem solving, and decision making are all invisible skills that guide teachers' choices and behaviors. By making these skills visible, the practicing teachers provided the pre-service teachers with a cognitive map of complex processes. Self-efficacy for a specific teaching task gained from cognitive modeling

can also enable pre-service teachers to assess effort expenditure, resulting in formation of new, or reassessment of existing, personal efficacy beliefs (Labone, 2004).

Practical Information. By sharing local knowledge, the teachers provided students with normative information about teaching that, like cognitive modeling, can provide some indication of task difficulty. One student commented, "It was so good to get the practical experience part from her too like how to talk to parents and how to have parent conferences. Those are things I just don't really get in my regular classroom." Another student stated, "With Miss Voss, it was helpful for her to explain what she does everyday and explain her process of the first day of school. Seeing the actual things that she did just brings it all to life."

Observers also benefit from seeing models overcome their difficulties by persistent effort rather than from observing only simplistic performances by expert models (Bandura, 1997). The three teachers were very forthright with the pre-service teachers in presenting themselves as teachers who have worked very hard to get where they are in their pedagogical understanding and who are continual learners. One student reflected, "I thought it was good to hear someone who was honest about the first year, instead of easing around the issue of it being hard. She was pretty frank and it was important to hear real experiences." Anther student elaborated, "Mrs. Clough explained that there is always room for improvement and that each year she finds strategies that work much better than ones she has used in the past... The willingness to be flexible and open-minded is essential for good teaching."

Seeing is Believing. The students observed all three teachers teaching in their respective classrooms after which they held a debriefing session. Since most students were in practicum placements where they did not observe the type of literacy instruction they were learning in their university course, this was their first opportunity to observe them in action. One student commented, "Watching the fifth-grade teacher Mrs. Clough, and seeing her class doing reading and writing made it all seem within my grasp...Her classroom was one of the first times I felt comfortable with the idea of my *own* classroom." Another student summarized the experience as follows:

> It's like the difference between being in a kitchen cooking with someone who cooks and helping them peel the onions as opposed to watching a cooking show. When you watch a cooking show, they already have most of the stuff completed for you and they already have the finished product. You are not actually hands-on. They don't tell you things like "Hey, when you're peeling the onions, your eyes are going

to sting a lot!" You never realize that. You don't realize when you're cooking and you run out of flour, what are you going to do? That will happen in a classroom sometimes. Things don't go the way you planned. You have to be able to improvise. On a cooking show, they don't improvise. They have everything set and planned out. This is how it goes in a perfect world. But it's not a perfect world out there. Sometimes the soufflés fall flat.

Obviously, this student understood that teacher decision making requires quick thinking. As discussed earlier, cognitive structures must be in place to guide and motivate teachers in the pursuit of decision making and effective literacy practices even when faced with challenging and shifting tasks and contexts. The teachers at Maple Ridge Elementary not only modeled effective literacy teaching in their classrooms, but also allowed students to acquire cognitive skills through the debriefing process.

The pre-service teachers also viewed the differences between the teaching methods used by the teachers at Maple Ridge Elementary School and their practicum placement as significant. One student conveyed, "My placement is in one particular setting so you only see one sort of way of teaching, whereas, with this, you get a variety of people doing different things in terms of their methods and how they approach teaching." Another commented, "It blew my mind because it's the complete opposite of what I am seeing in my practicum. Here again is another reason why this project works. It gives another forum for us to see teachers in action."

Along the same line, students also benefited from the perspectives of teachers at different grade levels as their required practicum and student teaching exposed them to one grade level, even though they would be certified to teach grades K-6. A student reflected:

> As someone doing his practicum in a fifth-grade classroom, I really like the chance to go and see some of the younger grades and get a sense of what happens down at that level. Especially in the first-grade class, it was very different from what I get on a weekly basis.

The Teacher Swap project provided vicarious experiences that would not have been possible through this university course instruction or the practicum placements. The above characteristics of the vicarious experiences provided by the teacher swap project assisted the pre-service teachers with determining that the teaching task is manageable and that they were capable of being successful.

Discussion

One student's reflection stated,

Looking through my notes I noticed comments like "This really works!" and "Their routine is amazing!" I learned so much about the kind of teacher that I want to be from these observations that my only regret is that another visit can't be squeezed into this semester!

The purpose of this study was to examine the influence that a university/public school partnership employing a knowledge-of-practice and local knowledge approach would have on the efficacy beliefs of pre-service teachers toward a decision making process in literacy instruction. The data indicated that by observing master teachers using best practice strategies in literacy instruction, seeing the methods in use with children, and getting a window into the thinking and experience of these master teachers, the pre-service teachers cultivated stronger self-efficacy beliefs for being able to implement these methods themselves.

There are several explanations for this finding. Social cognitive theory (Bandura, 1986; 1997) proposes that personal factors such as cognitive processes and behavior interact with the environment to influence each other through a process of reciprocal determinism. This project placed the students and teachers in situations that created a different status and thus, a different relationship between everyone involved. As a result, the level of relevancy was increased, so that even though the project entailed only four interactions between the elementary teachers and the students, the implications for influencing the students' efficacy were great.

The Teacher Swap brought the pre-service teachers together in a common experience observing, reflecting, and thinking with credible, trustworthy, and competent teachers who did not judge nor evaluate them. When students are in a nonthreatening environment and feel like they belong to a community of learners, they become invested partners in learning (Johnson & Altland, 2004). Too often, when pre-service teachers are in classrooms with cooperating teachers, most of what is observed as the daily experience of teaching is forgotten and not explained and therefore, its potential to influence pre-service teachers' learning is lost. Exposure to multiple and diverse models also influence the effectiveness of modeling in the formation of efficacy beliefs. All students at this university are placed in one classroom with one cooperating teacher at the beginning of the program and remain with that teacher through student teaching but the pre-service teachers in this study spent time in multiple classrooms. Research shows that observation of multiple and

diverse models as opposed to a single model performing multiple tasks are more effective in enhancing efficacy (Labone, 2004; Schunk, Hanson, & Cox, 1987).

Self-reflection has also been found to impact efficacy beliefs (Henson, 2001; Schunk & Zimmerman, 1997). The pre-service teachers in this study reflected on each of the four interactions with the three teachers as well as at least three lessons observed in their practicum placement. It is possible that the development of students' efficacy beliefs was facilitated by the appropriate attribution of these experiences to accurate explanations for success and failure. More research needs to be done to investigate the processes involved in such reflective practices and the impact of these practices on the development of pre-service teacher efficacy beliefs.

The present study's findings however, must ultimately be held tentatively. The study had a small sample size, and does not account for variables that may have influenced the results beyond participation in the Teacher Swap project. Yet, the positive efficacy beliefs for decision making for effective literacy instruction at the end of the study and after student teaching are of such magnitude that it is likely the Teacher Swap project contributed to them, at least in part. Longitudinal studies that examine the effect of the first years of teaching on efficacy must be conducted. As this study suggests along with other studies of inservice teachers, ongoing collaboration and mentorship for pre-service teachers entering the teaching force may prove to be a continued source of efficacy over time. The value of qualitative methods in this study should also not be underestimated. Tschannen-Moran, et al. (1998) state that the use of qualitative methods in efficacy research is "overwhelmingly neglected" and call for the use of "[i]nterviews and observational data [to] provide a thick, rich description of the growth of teacher efficacy" (p. 242). The qualitative nature of this study contributed to both the content and methods of inquiry into the development of teacher beliefs about decision making for effective literacy instruction.

Teacher candidates must be able to negotiate the multiple realities of what they are learning as best practice in their university courses and what they see modeled in their practicum placements. By doing this they will better construct the cognitive structures that will serve to guide and motivate them when faced with making well-informed and thoughtful decisions about literacy instruction best suited to meet their students' individual needs. Duffy (2002) states, "Developing the strength to do this in the face of pressure to conform is a central task of teacher education" (p. 340). If schools of education and teacher educators are to increase pre-service teachers' efficacy for reflective decision making in literacy instruction, then creating environments for efficacious learning must be a priority.

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