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The influence of prior experiences on teaching schemata of traditional and nontraditional elementary preservice teachers

James Richard Birrell
University of Nevada, Las Vegas

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THE INFLUENCE OF PRIOR EXPERIENCES ON TEACHING
SCHEMATA OF TRADITIONAL AND NONTRADITIONAL
ELEMENTARY PRESERVICE TEACHERS

by

James R. Birrell

A dissertation submitted in partial fulfillment
of the requirements for the degree of

Doctor of Education

in

Curriculum and Instruction

Department of Instructional and Curricular Studies
University of Nevada, Las Vegas
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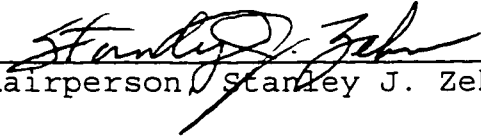
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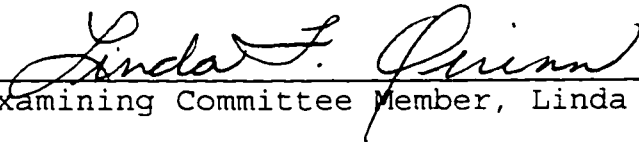
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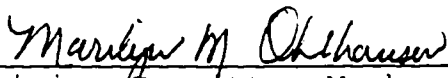
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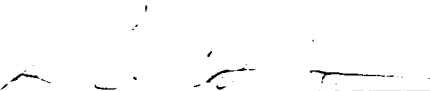
Examining Committee Member, Linda F. Quinn, Ed.D.



Examining Committee Member, Marilyn M. Ohlhausen, Ph.D.



Graduate Faculty Representative, Eunsook Hong, Ph.D.



Dean of Graduate College, Ronald W. Smith, Ph.D.

ABSTRACT

This study explored the influence of prior experiences on teaching schemata of traditional and nontraditional elementary preservice teachers. Data collection was conducted at Western State University (WSU) in the desert southwest, U.S.A. The influence of prior experiences on two dimensions of teaching schemata were explored in this study. Stimulated recall interviews of peer lessons illuminated the influence of prior experiences on thirty-eight traditional and twenty-two nontraditional elementary preservice teachers' classroom interactive dimensions (CID). Concept mapping illuminated the influence of prior experiences on participants' reflective/introspective dimensions.

Participant responses from stimulated recall and concept map interviews were transcribed and compared to categories of prior experience and knowledge. Data revealed that both groups' peer lessons and concept maps were influenced by similar experiences. Four themes emerged from the study that conceptualized the influence of prior experiences on teaching schemata. Implications for teacher education were drawn.

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CHAPTER 1

OVERVIEW OF THE STUDY

Introduction

Prospective teachers enter teacher education programs with previously constructed ideas, knowledge, and beliefs about teaching that effect the way they interpret and make use of new information about teaching (Britzman, 1991; Clandinin, 1985; Clandinin & Connely, 1987; Goodman, 1988). Given the wide acceptance of this view, increasing numbers of researchers have explored how life experiences, prior to teacher education, influence prospective teachers' professional development (Bullough, 1989; Calderhead & Robson, 1991; Goodson & Walker, 1991; Kennedy, 1990; Pajares, 1992; Novak & Knowles, 1992; Tamir, 1992). These studies support Lortie's (1975) assertion that predispositions about teaching are at the core of becoming a teacher and are a primary influence on prospective teachers' professional development. Other researchers have extended Lortie's claim, suggesting that prospective teachers acquire beliefs about good and bad teaching early in life that are influenced by experiences with former classroom teachers (Ball & Goodson, 1985, Bullough, Knowles, & Crow, 1992; Knowles, 1988; Powell, 1992; Weinstein, 1989).

Studies exploring the nature of nontraditional, career-change preservice teachers have suggested that this group of

prospective teachers who enter teaching from other careers hold beliefs, ideas, knowledge, and capabilities that, in addition of prior schooling, have been developed through prior work and personal life experiences (Bullough & Knowles, 1991; Goodson, 1991; Powell & Riner, 1991; Zeichner, 1986). Nontraditional students' professional and personal life experiences influence what they learn about teaching during teacher education (Freidus, 1992; Moore & Yauno, 1992), how they initially prepare and present lessons (Powell, 1992; Powell & Riner, 1991), and the level of optimism about their future success as classroom teachers (Weinstein, 1989).

Despite differences in the type and amount of life experiences for traditional and nontraditional preservice teachers, both groups bring to their preservice program teaching schemata that were developed from prior experiences (Bullough et al., 1992; Howard, 1987; Neisser, 1976). Teaching schemata were viewed in this study as personal cognitive frameworks about planning and teaching (Howard, 1987). Because nontraditional students typically have more extensive work, life, and child-raising experiences than traditional students (Bennett, 1991; Bullough et al., 1992), they have teaching schemata that are grounded less often in memories of former schooling experiences than in life events that have occurred away from classroom contexts. Thus, nontraditional students may have developed beliefs, ideas,

and work behavior (i.e., teaching schemata) away from classroom contexts that influence how they act in instructional settings (Holt-Reynolds, 1992; Powell & Riner, 1991). The purpose of this study was to explore how prior experiences influence teaching schemata of thirty-eight traditional and twenty-two nontraditional elementary preservice teachers.

Theoretical Framework

The literature on teachers' prior experiences (Buchmann, 1984; Britzman, 1991; Powell, 1993; Weinstein, 1989), schema¹ theory (Anderson, 1984; Howard, 1987; Neisser, 1976), and nontraditional, career-change preservice teachers (Crow, Levine, & Nager, 1990; Meertz & McNeely, 1992; Powell, 1992) provided a theoretical framework for exploring the influence of prior experiences on traditional and nontraditional elementary preservice teachers' schemata of teaching. Regarding the influence of prior experiences, particularly former schooling experiences on prospective teachers' schemata of teaching, Bullough et al., (1992) argue:

Beginning teachers bring with them to teaching a schema for teaching, embedded in the teaching self, which like all schema, provides the skeleton of meaning around which the situation is interpreted. This schema,

¹Schema is the singular form for schemata.

operating as an implicit theory of teaching, is formed over years of experience interacting with teachers. It reflects a model of what the individual believes that teaching is supposed to be (p. 10).

Prospective teachers' schemata of teaching are influenced by personal reactions to teaching styles of former classroom teachers. By generalizing as normative their own reactions to former K-12 teachers' classroom and instructional behavior, prospective teachers develop personal theories of good teaching within their schemata of teaching (Knowles and Holt-Reynolds, 1991).

Thus, as Goodlad (1982) suggested, teachers teach in ways they were taught. In support of Lortie's claim about the primacy of former schooling experiences in developing prospective teachers' predispositions about teaching, Goodlad (1982) argued, "Professional preparation comes too late...and is too little and too thin to separate them from what their experience has taught them that teaching is. Their professional preparation and subsequent practice merely reinforce their own perceptions" (pp. 19-20). There is mounting evidence to support the notion that prior experiences influence preservice and inservice teachers' knowledge of teaching (Ball & Goodson, 1985, Bullough, Knowles, & Crow, 1992; Knowles, 1988; Powell, 1992; Weinstein, 1989; Zeichner, 1986). While these studies support and extend Goodlad and Lortie's claim, they do not

fully explain how prior experiences influence teaching schemata.

Prior Experiences

There are many like Goodlad who argue that prospective teachers' individual schemata of teaching result from experiences with memorable former classroom teachers (Feiman-Nemser, 1983; Goodson, 1983; Grossman, 1991; Lortie, 1975). Feiman-Nemser (1983) asserts that the quality of relationships prospective teachers had as children with former teachers becomes a prototype for subsequent relationships throughout life. Connell (1985) extends Feiman-Nemser's claim by suggesting that the relationship with parents influences how prospective teachers interact with children now that they are adults. Zeichner and Gore (1990) note that prospective teachers' relationships with adults, be they former teachers or parents, go beyond establishing templates for building future relationships. Instead, experiences with memorable adults shape students' early views of effective teaching by providing them with replicable models of behavior as they assume adult roles. Furthermore, as prospective teachers become parents, experiences with their own children develop parenting schemata that inform their views on classroom teaching and student relationships (Bullough & Knowles, 1991; Freedman, 1987). Prior experiences influence prospective teachers' development of teaching schemata, but additional research is

needed if we are to develop a better understanding of the nature of these influences on professional development of teachers (Woods, 1987).

Schemata

Schemata were used in this study to explore the goodness of fit (Rummelhart, 1980) between prospective teachers' conceptions of teaching that develop from years of observing former teachers and the actual teaching situations they encounter. When prospective teachers are able to make sense of new and unfamiliar teaching situations, new knowledge gained from those situations is assimilated into existing schemata (Anderson, 1977; Piaget, 1971).

Assimilation of new knowledge with existing knowledge helps prospective teachers develop a rationale for acting in unfamiliar contexts and situations (Anderson, 1984). Because schemata are not easily changed, prospective teachers seek to assimilate new knowledge with old knowledge rather than accommodate, or change their existing schemata. Accommodation is necessary when prospective teachers cannot defend their actions and beliefs in a situation and must change their actions and beliefs to make a situation meaningful (Bullough et al., 1992).

The notions of assimilation and accommodation were theoretically useful in this study. They provided a means of exploring how prospective teachers' prior experiences influenced their schemata of teaching. Nontraditional

preservice teachers begin teacher education programs with schemata of teaching that are influenced by prior work experiences, raising a family, and by other life experience (Powell, 1992). These experiences are central to the development of nontraditional preservice teachers' conceptions of teaching and of themselves-as-teachers (Goodson, 1991). Nontraditional and traditional preservice teachers' conceptions of themselves-as-teachers (i.e, their teacher role identity [Crow, 1987]), are influenced by the goodness of fit between the schemata of teaching they bring to their teacher education program and the schemata they will need to become effective classroom teachers (Anderson, 1984). Bullough et al., (1992) argue that if schemata do not prove to be fitting, both traditional and nontraditional prospective teachers' potential for becoming effective classroom teachers is diminished. Becoming a productive, well-articulated teacher is influenced by prospective teachers' ability to assimilate and accommodate knowledge gained from new experiences during teacher education with knowledge gained from prior experiences (Anderson, 1984). Furthermore, prospective teachers' ability to learn from prior experiences influence what and how they learn from present and future experiences, and affects their ability to use their existing knowledge in classroom settings (Anderson, 1985). Because prior experiences influence schemata, and because schemata influence teaching behavior,

prior experiences may influence prospective teachers' instructional effectiveness during teacher education and throughout their careers.

Nontraditional Preservice Teachers

Increasing numbers of nontraditional preservice teachers are entering teacher education (Bennett, 1991; Hawk & Schmidt, 1989), with schemata of teaching that have been influenced by experiences outside of classroom contexts (Powell, 1992; Powell & Riner, 1991). This group's work, family, and overall life experiences have developed schemata with which to interpret teacher education programs and classroom teaching experiences (Bullough, 1989).

Nontraditional preservice teachers' schemata of teaching are influenced by extensive work, family, and overall life experience. This group may possess previously constructed ideas, knowledge, and beliefs about teaching that are inappropriate for classroom settings (Holt-Reynolds, 1992) and will affect the way they interpret and make use of new information about teaching during teacher education. Additional studies are needed that explore how nontraditional elementary preservice teachers' prior experiences influence their schemata of teaching.

Statement of the Problem

Recent studies have provided empirical evidence that prior experiences influence teaching schemata (Hollingsworth, 1989; Knowles, 1987; Madfes, 1991; Powell,

1992; Woods, 1987). However, little is known about how nontraditional elementary preservice teachers' former K-12 teachers, prior work, parenting experiences, and overall life experiences interact to mediate the development of schemata in the process of becoming a teacher (Zeichner & Gore, 1990).

Powell (1992) reported the influence of prior experiences on seventeen traditional and twenty-five nontraditional secondary preservice teachers' initial conceptions of teaching. Four categories and twelve subcategories of prior experience and knowledge that influenced secondary teachers' construction of lesson plans and concept maps of teaching were developed by Powell (1992) (see Table 1, page 10²). Similar studies are needed with elementary nontraditional preservice teachers in order to illuminate how prior experiences influence their schemata of teaching. Given that life experiences are at the core of initial conceptions of teaching (Lortie, 1975; Kagan, 1992), and given that those conceptions influence instructional behavior (Anderson, 1984; Weinstein, 1989), studies are needed that explore how prior experiences influence traditional and nontraditional elementary preservice teachers' schemata of teaching.

²Table 1 includes an additional category of "interactions with children who are not offspring" that was added during this study.

Table 1 Categories and Subcategories of Prior Experience**SCHOOLING EXPERIENCES**

Teacher education	Teacher education courses and related experiences
K-12 Schooling	K-12 teachers and experiences as students
College role	college teachers and/or classes

PERSONAL FEATURES

Personal needs	Personal needs being met by entering the teaching profession (i.e., stable income, job security). This category was widened for elementary preservice teachers to include intrinsic and emotional needs, such as increased self-esteem, need to "save" children from various influences, or make a difference in the world.
Belief/value system	Personal beliefs and values about learning and teaching that are linked to a world view such as religion or philosophy, or to personal perspectives such as parenting
Personal learning style	Personal learning style or way of getting information
Beliefs about	What students should do in school, how they should learn, and how students should be treated

LIFE EXPERIENCES

Prior work	Part-time or full-time employment prior to or during teacher education
Non-classroom teaching	Teaching roles outside the school teaching classroom, such as training in business or industry, church school, dance lessons, aerobics instructor, and tutoring
Relatives	Relatives who are educators
Parenting	Experiences with own children
Interactions with children	Elementary preservice teachers' experiences with children, including younger siblings, nieces and nephews, friends' children, neighborhood children, babysitting who are not offspring

CONTENT KNOWLEDGE

Content knowledge	Content to be taught
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Research Objective and Questions

The primary objective of this study was to examine the influence of prior experiences on teaching schemata of traditional and nontraditional elementary preservice teachers. Using the four categories (see Table 1, p. 10) and twelve subcategories of prior experience and knowledge reported by Powell (1992), this study asked:

1. How do former schooling experiences influence teaching schemata?
2. How do personal features influence teaching schemata?
3. How do life experiences influence teaching schemata?

Contributions of the Study

This study contributes to the literature on nontraditional elementary preservice teachers in two ways. First, it illuminates how prior experiences influence elementary nontraditional students' schemata of teaching. Second, it shows how elementary preservice teachers' schemata of teaching influence their planning and instruction and overall conceptions of teaching.

Limitations of the study

Limitation 1: Replication

This study was developed using research methods and a coding instrument designed to enhance both validity and replication of this study. However, the uniqueness of WSU and of its preservice teacher population, coupled with the

investigator's own research limitations and bias (Peshkin, 1988), could result in findings different from those in similar studies.

Limitation 2: Limitations of Data Collection Procedures

The methods selected for this study have inherent limitations that may influence the findings. Research methods used in this study were intended to illuminate preservice teachers' thoughts of teaching (Beyerbach, 1988; Provenzo et al., 1989). Problematically, Kagan (1990) argues that preservice teachers' thoughts about teaching are not easily accessed because (1) they are held unconsciously, (2) preservice teachers sometimes do not have the language to describe them, (3) they are highly contextualized in that they are associated with specific events, and (4) preservice teachers may be reluctant to express their thoughts under certain conditions. Furthermore, teaching schemata were self-reported to the course instructor. This may influence prospective teachers' thinking and behavior during data collection (Calderhead, 1981). For these reasons the findings of this study are not generalizable. However, they are transferable (Lincoln & Guba, 1985) to similar contexts and preservice teacher populations.

Limitation 3: Teacher of Participants

Data generated in this study may have been influenced by the fact that the researcher was also the introductory course instructor. Conceivably, student responses may have

been tailored to express thoughts they believed the instructor would have them say (Kagan, 1990).

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

This study explored the influence of prior experiences on teaching schemata of traditional and nontraditional elementary preservice teachers. Chapter two reports on studies that have (1) examined the nature and functions of schemata, (2) called for further exploration of the influence of prior experiences on teaching schemata, (3) examined prospective teachers' thinking about planning and teaching using the notion of schemata as a theoretical framework, and (4) illuminated the nature and personal characteristics of traditional and nontraditional preservice teachers. Moreover, studies included in this review were useful for hypothesizing about the relationship between prior experiences and teaching schemata for both traditional and nontraditional preservice teachers.

The first section of this chapter reviews the three categories of studies on schema theory described above. This section reports studies that explore the origins, characteristics, and functions of schemata. The second section of chapter two reports studies that examine the nature of and differences between traditional and nontraditional preservice teachers. Studies were selected for this section because they explored traditional and

nontraditional preservice teachers' prior experiences and how those experiences influenced their initial concepts of teaching and instructional behavior.

Schema Theory

Following earlier studies (Bennett, 1991; Beyerbach, 1988; Birrell, 1993; Carter & Doyle, 1987; Morine-Dershimer, 1991; Powell & Riner, 1992; Tamir, 1991; Tochon, 1990), this investigation used the notion of schemata to examine the knowledge that traditional and nontraditional preservice teachers use during lesson planning and instruction. Schemata are mental structures of knowledge that are used to give meaning to life experiences and to provide a rationale for responding to unfamiliar situations (Bennett, 1991; Powell, 1990; Howard, 1987; Neisser, 1976; Norman & Rummelhart, 1975). As people interpret experience, the resulting knowledge is assimilated into existing schemata (Bullough et al., 1992; Piaget, 1971; Rummelhart & Norman, 1978). When prospective teachers cannot assimilate new information with old, their existing schemata must be altered or changed to accommodate new or unfamiliar knowledge (Howard, 1987; Rummelhart & Norman, 1975).

Schemata work either through assimilation or accommodation to order and give meaning to experience (Anderson, 1984; Rummelhart, 1980). Rummelhart (1980) noted:

Perhaps the central function of schemata is in the construction of an interpretation of an event, object, or situation; that is, in the process of comprehension. In all of this, it is useful to think of a schema as a kind of informal, private, unarticulated theory about the nature of events, objects, or situations we face (p. 37).

Rummelhart (1980) also stated that, "The total set of schemata we have available for interpreting our world in a sense constitutes our private theory of the nature of reality (p. 37). Prospective teachers' private theories of the nature of teaching within their schemata of teaching become one basis for predicting how they will act in instructional settings (Howard, 1987; Rummelhart, 1984).

In addition, schemata promote learning by providing prospective teachers with a rationale for responding to new problems or unfamiliar situations (Anderson, 1984; Bullough et al., 1992). Prospective teachers who apply appropriate schemata to resolve classroom or instructional problems increase their ability to solve future problems (Anderson, 1985; Rummelhart & Norman, 1978). The more schemata prospective teacher can appropriately apply to problem solving the more expertise they develop (Livingston & Borko, 1989). Prospective teachers with less relevant schemata may apply the wrong solutions to resolving classroom problems (Livingston & Borko, 1989), reducing the likelihood that

problems will be appropriately resolved (Bullough et al., 1992).

Expert teachers possess relevant teaching schemata (Livingston & Borko, 1989) which promote effective work practices (Anderson, 1985; Michelson, 1987). Conversely, novices' schemata are less useful to inform their behavior in classroom settings. The degree to which prospective and novice teachers become effective classroom instructors depends upon their ability to develop appropriate schemata for solving classroom problems (Strahan, 1989). In sum, becoming an effective classroom teacher depends upon the successful application of preservice and inservice teachers' schemata of teaching to classroom and instructional situations. For this reason, prospective teachers' schemata of teaching should be examined by themselves and by teacher educators during teacher education programs (Peterson & Comeaux, 1987).

Schema Theory as a Theoretical Framework

The exploration of schemata, as a means of illuminating preservice teachers' thinking about planning and teaching, is fundamentally important to teacher education. Schemata are influenced by interpreting and giving meaning to prior experiences (Anderson & Pearson, 1984; Howard, 1987; Neisser, 1978; Rummelhart, 1984). Both the interpretation of prior experiences and the schemata that result from them play a crucial role in developing instructional beliefs and

behavior (Anderson, 1984; Britzman, 1991; Livingston & Borko, 1989; Woods, 1987). Understanding how prior experiences influence teaching schemata may help prospective teachers' recognize how their interpretations of prior experiences influence their professional development (Joyce, 1980; Knowles, 1988; Peterson & Comeaux, 1987).

Livingston and Borko (1989) used the notion of schemata to explore differences in expert and novice teachers' planning and instruction. Expert teachers possessed relevant schemata that increased their teaching effectiveness. Student needs and learning styles determined expert teachers' instructional goals, teaching styles, questioning strategies, and lesson pacing. Because novice teachers' schemata were less relevant in comparison to expert teachers, novices' instructional effectiveness was hindered. This group's teaching was influenced by overdependence on lesson plans and by their inability to answer student questions unrelated to the lesson.

Using the notion of schemata, Bullough and Knowles (1991) reported how one beginning secondary teacher's schemata of teaching influenced her classroom teaching. Because Barbara, the participant in the study, possessed only partially relevant teaching schemata, her ability to appropriately respond to unfamiliar classroom problems and situations was limited. Without additional schemata Barbara was unsure about how to solve classroom problems encountered

during her novice year of teaching. Increasingly, she relied upon parenting schemata to inform her thinking about classroom problems. Given that parenting and teaching occur in different contexts, applying her parenting schemata to resolving classroom problems caused her to act in ways that made her adjustment to teaching more difficult.

Bullough, Knowles, and Crow (1992) reported that beginning teachers brought to teacher education programs teaching schemata that were formed from years of experience with former K-12 classroom teachers. These experiences were held in prospective teachers' memories of positive and negative teacher role-models. When memories of interactions with a particular teacher were favorable, preservice teachers generalized that other students would find similar interactions equally as favorable. When memories were negative, prospective teachers' assumed that all students would find similar interactions with teachers just as undesirable. Memories of positive and negative teaching experiences provided preservice teachers with a rationale for determining classroom teaching behavior.

Recently, Freidus (1992) examined ten nontraditional elementary preservice teachers' schemata of teaching. She reported that schemata grew out of the individual's public and private experiences; new experiences assumed meaning within the context of prior knowledge. Because prospective teachers' schemata of teaching were developed from memorable

life experiences as students, their schemata needed to be expanded. Freidus (1992) explained:

When students become teachers, they must almost invariably change their schema, their schema of teaching and their schema of what it means to be a teacher. Frequently this requires that they modify their attitudes and expectations- about themselves, their students, and about the educational process itself.

According to Freidus (1992), expanding teaching schemata required preservice teachers to engage in much soul searching about their own experiences and how those experiences influenced their individual teaching schemata. Without help in seeing teaching from more professional vantage points, preservice teachers relied upon what was best known from memory to inform their teaching and not upon knowledge of teaching gained during teacher education.

Powell and Riner (1991) used the notion of schemata to probe the relationship between prior experiences and entry-level teaching schemata and to examine how schemata were influenced by teacher education curricula and experiences. The study reported that preservice teachers' initial schemata of teaching did not always lead to effective instructional behavior. Prospective teachers' initial theories of teaching, contained within their schemata of teaching, were so well-developed that they inhibited the

development of pedagogically informed schemata of teaching.

Only as prospective teachers spent time in teacher education coursework and in school settings did their schemata of teaching become modified to fit the classroom environment. In their conclusion, Powell and Riner (1991) argue that because teaching schemata influence what prospective teachers can learn about teaching during teacher education there was a pressing need for prospective teachers to explore how their misconceptions of teaching interfered with student learning.

Finally, Holt-Reynolds (1992) reported that exploring prospective teachers' schemata of teaching illuminated potentially misleading and unproductive sources of knowledge of teaching. Despite originating in school settings, prospective teachers' schemata were often inappropriate for classroom settings. Prospective teachers' schemata needed to be restructured because their knowledge of teaching interfered with seeing the usefulness of instructional strategies and theory-based knowledge of teaching presented in one teacher education content course. In this study preservice teachers consistently rejected teacher educators' theory-based definitions of good teaching in favor of their own definitions held firmly in their memories of former teachers and classroom experiences. Because prospective teachers' memories of former teachers have endured longer than the length of any teacher education course, prospective

teachers' initial schemata of teaching remained steadfast and little changed during teacher education (Crow, 1987).

Exploring Teaching Schemata

Within prospective teachers' schemata of teaching are idiosyncratic theories about classroom planning and instruction (Holt-Reynolds, 1992; Knowles & Holt-Reynolds, 1991; Ost, 1989; Weinstein, 1989) that result from years of observing and interacting with classroom teachers (Lortie, 1975; Powell, 1992; Weinstein, 1989). The years students spend observing classroom teachers concurrently frame their teaching schemata and their teacher role identities (Lortie, 1975; Crow, 1987; Ost, 1989). Initially, prospective teachers interpret former classroom teachers' instructional behavior using their student schemata (Freidus, 1992; Holt-Reynolds, 1992). Thus, prospective teachers' knowledge of teaching within their schemata may be a potentially misleading and unproductive foundation of knowledge for learning about teaching (Holt-Reynolds, 1992; Powell, 1992; Tamir, 1991). For this reason, preservice teachers' initial teaching schemata need to be examined during teacher preparation (Holt-Reynolds, 1992; Powell, 1991). Understanding their teaching schemata will help preservice teachers recognize how life experiences influence their teaching effectiveness (Knowles, 1988).

A further reason for examining preservice teachers' teaching schemata is that schemata develop early in life

(Weinstein, 1989) and are influenced by memories of experiences with and reactions to former teachers and classroom events (Lortie, 1975; Novak & Knowles, 1992; Powell & Riner, 1991). Because of experiences and reactions to former teachers, prospective teachers develop personal theories of effective teaching within their schemata (Knowles & Holt-Reynolds, 1991).

Because preservice teachers' personal theories of teaching have evolved from prior experiences as students, their individual responses to teaching events are generalized as normative (Holt-Reynolds, 1992). In other words, preservice teachers assume that all students will react as they did when treated or taught in certain ways. As a result, prior experiences develop beliefs about teaching that are not easily changed (Bullough & Knowles, 1991; Howard, 1987; Schallert, 1982).

Helping preservice teachers understand the theories and practices that lead to effective teaching is a primary goal of teacher education (Bullough, Knowles, & Crow, 1992; Barnes, 1989; Bennett, 1988; Berliner, 1988). Teacher educators must either present theories and practices in ways that are consistent with preservice teachers' individual teaching schemata, or teach preservice teachers a new construct that will assist them to learn the materials (Howard, 1987; Rummelhart & Norman, 1978). Neither will be easily accomplished, because preservice teachers may not

recognize the content of their own teaching schemata until their idiosyncratic theories of teaching appear either in contrast with or in opposition to theories of teaching presented during teacher education (Holt-Reynolds, 1992). Thus, helping preservice teachers see how prior experiences influence their teaching schemata will help them build on their useful, existing knowledge of teaching during teacher preparation.

Another reason for examining the influence of prior experiences on teaching schemata is due to changes in preservice populations. Increasing numbers of nontraditional preservice teachers are self-selecting teaching as a second career (Novak & Knowles, 1992; Powell, 1992). They bring different life experiences to teacher education and have developed teaching schemata that are different from their traditional colleagues (Bullough & Knowles, 1991; Powell & Riner, 1991). Nontraditional preservice teachers' schemata of teaching are more often influenced by prior work and family experiences (Powell, 1992). Consequently, the knowledge they use during planning and instruction may be inappropriate for classroom settings. Studies are needed that examine how nontraditional preservice teachers' prior experiences differ from traditional students and how those differences establish a framework for planning and teaching.

Summary of Section One

Section one examined the nature and function of schemata and reported select studies that used the notion of schemata to explore preservice and inservice teachers' thinking about planning and teaching. These studies had similarities worth noting. First, each study provided evidence that schemata could be explored using qualitative methods. Second, they supported the notion that early schooling experiences were at the core of developing attitudes and beliefs about learning and learners. Third, they showed that beginning preservice and inservice teachers relied more upon their own theories of teaching to inform their instruction than upon bodies of professional knowledge (Shulman, 1987). Fourth, they illuminated the idiosyncratic nature of knowledge about teaching contained within preservice and inservice teachers' schemata of teaching. Fifth, they provided evidence that teaching schemata influenced preservice and inservice teachers' instructional behavior and reactions toward students in classrooms. These studies were useful in hypothesizing about the influence of prior experiences on teaching schemata of traditional and nontraditional elementary preservice teachers in this study.

Traditional and Nontraditional Preservice Teachers

Traditional and nontraditional preservice teachers bring different prior experiences to their teacher education programs (Bullough & Knowles, 1990). There is evidence to

suggest that differences between traditional and nontraditional students' prior experiences generate different teaching schemata for both groups (Freidus, 1992; Moore & Yauno, 1992; Powell & Riner, 1991). Given that schemata influence prospective teachers' classroom instructional behavior (Anderson, 1984), differences in both groups' schemata may lead them to act differently toward instructional tasks and student/teacher interactions. This section examines each group separately and reports current knowledge about the ways prior experiences influence both groups' teaching schemata.

Traditional Preservice Teachers

Recent studies have characterized traditional preservice teachers as persons who entered teacher education programs after graduating from high school, or who, after receiving a college diploma remained in college to obtain their teaching credentials (Powell, 1992; Powell & Riner, 1991). Furthermore, traditional students can be married or single, may be parents, and usually have limited part-time work experiences (Bullough & Knowles, 1991). Traditional preservice teachers typically are younger than nontraditional preservice teachers and have fewer overall life experience away from classrooms (Powell, 1992).

Because secondary traditional preservice teachers usually have less extensive life experience, Powell and Riner (1991) noted that their teaching schemata were most

notably influenced by memories of former teachers, and by family members who were teachers. Similar findings were reported in other studies (Bullough & Knowles, 1990; Lortie, 1975; Ost, 1989; Powell, 1992; Weinstein, 1989). Powell (1992) reported that because secondary traditional students had recently graduated from high school, their ideas about what students should be doing in classrooms were more recently developed. However, despite their beliefs about learners, traditional students needed help developing a rationale for their beliefs about learning and about the purposes of education. Traditional preservice teachers with relatives who taught school particularly needed help developing individual theories of learning. Because family members and friends who were teachers left imprints of their own teaching philosophy upon the minds of younger traditional students, Powell (1992) suggested that some traditional students needed help developing autonomous views of teaching. Other studies support these findings (Feiman-Nemser & Buchmann, 1986; Powell & Riner, 1991).

Feiman-Nemser and Buchmann (1986) explored the development of pedagogical thinking of two first year teacher education students, one traditional and one nontraditional. The traditional student, called Janice, held initial beliefs about teaching that were strongly influenced by memories of teaching her younger brother and sister to drive the family tractor. According to Feiman-

Nemser and Buchmann (1986), nonclassroom teaching experiences prior to teacher education influenced Janice's initial conceptions of teaching more than her teacher education program. When Janice experienced disparity between her expectations of teaching and the realities of teaching, she turned to her family for guidance in resolving classroom problems rather than to her teacher education instructors. As a result, her knowledge of teaching contained within her teaching schemata changed little during her first year of teacher education.

The studies above, and others (Berliner, 1988; Buchmann, 1987; Crow, 1987; Goodman, 1988; Feiman-Nemser, 1983; Leinhardt & Greeno, 1986; Lortie, 1975; Peterson & Comeaux, 1987; Shulman, 1987; Weinstein, 1989) support the notion that traditional preservice teachers typically entered teacher education programs with strong theories of teaching that were influenced by schooling experiences, family members, and nonclassroom teaching prior to teacher education. However, just how classroom experiences, former teachers, family relationships, and nonclassroom teaching influenced traditional elementary preservice teachers' early conceptions of teaching is yet unclear (Zeichner & Gore, 1990). Studies are needed that more fully explore the nature and qualities of events that influence this group's initial schemata of teaching.

Nontraditional Preservice Teachers

This section reports select studies that explored how nontraditional preservice teachers' prior experiences influenced their schemata of teaching. Recent studies have suggested that nontraditional, career-change preservice teachers brought extensive life and work experiences to teacher education (Bullough & Knowles, 1991; Freidus, 1992; Moore & Yauno, 1992; Novak & Knowles, 1992; Powell, 1991, 1992). As a result, this group's schemata of teaching were primarily influenced by prior work, parenting, and family experiences (Powell & Riner, 1991).

While a number of teachers leave classrooms to pursue careers other than teaching (Novak & Knowles, 1992), many people leave successful careers unrelated to education in order to become teachers (Crow, Levin & Nager, 1990; Bullough, 1990; Powell, 1992). For example, Novak and Knowles (1992) reported that four nontraditional beginning elementary teachers had left successful careers in business to pursue their life-long dreams of teaching. All four nontraditional teachers entered the classroom with teaching schemata that were influenced by prior work experiences. Their classroom organization, content knowledge, student/teacher interactions, and responses to student misbehavior were influenced by experiences in their former careers.

All four nontraditional teachers began teaching with considerable knowledge of computers acquired from prior work experiences. Each intended to use their computer knowledge to increase students' knowledge of computers. However, these teachers soon discovered that their schemata did not contain knowledge of how children learn. Thus, these nontraditional teachers restructured their teaching schemata to accommodate new understandings about childrens' learning styles and capabilities in classroom settings. The degree to which these nontraditional teachers became successful classroom teachers depended upon their ability to accommodate new knowledge about teaching and children within their existing schemata.

Because nontraditional students had a wider range of personal and professional experiences than traditional preservice teachers, Novak and Knowles (1992) were optimistic about this group's potential for becoming successful teachers. Other studies showed that nontraditional teachers possessed heightened motivations and articulated clearer reasons for becoming teachers, often viewing teaching as a means of improving their income levels, social status, and self-esteem. Wittkamper and Harris (1987) and others (Bullough, 1990; Bullough & Knowles, 1991; Crow, Levine & Nager, 1990; Merseeth, 1986; Spencer & Tinajero, 1989) confirmed these findings, claiming that increased pay, social status, and self-esteem were

sufficient reasons for becoming teachers. These studies also suggested that some nontraditional students were willing to take less pay and leave family and children to become teachers.

Moore and Yauno (1992) were less optimistic about nontraditional students' adjustment from prior careers to classroom teaching. The study showed that eighty-six nontraditional preservice teachers faced six challenges to becoming a teacher that were less common among traditional students. First, nontraditional students had difficulty in shifting their thinking from that of a worker to a student to a teacher. Second, they were harder on themselves with regard to their expectations for successful teaching. This elevated their level of stress and anxiety. Third, they believed that their own "real world" experiences were of greater value in becoming a teacher than were their teacher education experiences; thus, they were highly critical of their teacher education programs, cooperating teachers, university instructors, and field supervisors. Fourth, they were highly critical of childrens' classroom behavior, which influenced their attitudes toward students and the tone and temperament of their classroom learning environment. Fifth, nontraditional students who took pay decreases to become teachers believed their social status had declined as a result of earning less money as teachers. Sixth, this group was less willing to ask for help in overcoming the struggles

and challenges they encountered during teacher education because of unrealistic expectations of themselves as teachers. Adding to this list, Berliner (1988) reported that because nontraditional teachers were less familiar with classroom events, given their time away from classroom settings, they were less likely to distinguish what was important from what was not important in the "booming, buzzing confusion of life in classrooms" (p. 13).

These studies informed the investigator about the nature of nontraditional students (i.e., how they differ from traditional students, and about the challenges they face adjusting to becoming classroom teachers). Moreover, these studies illuminated the kinds of prior experiences that informed nontraditional students' initial knowledge of teaching (i.e., prior work, parenting). The studies sensitized the researcher to some of the ways prior experiences influenced both traditional and nontraditional students' initial views of learning and learners and how those views influenced their instructional behavior.

Conclusion

In conclusion, studies reported in chapter two confirmed the notion that traditional and nontraditional preservice teachers' schemata of teaching were developed in part from interpreting and giving meaning to life experiences. Nontraditional students had more extensive work and family experiences than traditional students, and

therefore developed conceptions of teaching that differed from those of traditional students. Few studies specifically illuminated how both groups of prospective teachers' prior experiences developed knowledge of teaching within their schemata, and how that knowledge was transformed during instruction. Furthermore, the nature of teaching knowledge was not clearly defined in the literature. These studies led the researcher to conclude that preservice and inservice teachers' most vital knowledge of teaching did not consist of a codified body of knowledge (Shulman, 1987), but rather in the compilation of insights, beliefs, attitudes, memories and associations, with all their inconsistencies and contradictions, that prospective teachers used to make decisions about teaching (Woods, 1987).

Finally, the studies showed that increasing numbers of nontraditional students have entered teacher education. This group's schemata of teaching were not primarily influenced by K-12 schooling experiences. The prior experiences that influence this group's teaching schemata (e.g., career work, parenting duties, and nonclassroom teaching experiences) have received insufficient attention from researchers (Zeichner & Gore, 1990). More attention needs to be given to the influence of prior experiences on traditional and nontraditional elementary preservice teachers' conceptions of teaching and instructional behavior

(Bullough, 1989; Crow, 1987; Knowles, 1988; Feiman-Nemser & Buchmann, 1986; Woods, 1987).

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

Chapter three describes data collection and analysis procedures used in this study. Specifically, stimulated recall interviews of peer lessons, concept map think aloud interviews, interview transcripts, and observations of peer lessons were primary sources of data for examining the influence of prior experiences on teaching schemata of traditional and nontraditional elementary preservice teachers. These methods were selected because they have demonstrated validity in exploring preservice teachers' thinking during planning and teaching (Beyerbach, 1988; Bolin, 1988; Calderhead, 1981; Nespor, 1985; Powell, 1992; Powell & Riner, 1991; Strauss and Corbin, 1991). The first section of chapter three describes the research context for this investigation. Sections two and three describe data collection and data analysis procedures. The final section discusses assumptions of the study.

Research Context

This study was conducted at Western State University (WSU) in a desert southwestern region of the United States. WSU's elementary teacher education sequence begins with the Introduction to Elementary School Teaching course. This course explores the duties of an elementary school teacher,

examines the complexity of being a teacher, and promotes self-analysis and reflection about participants' reasons for self-selecting a career in teaching. In addition, the introductory course offers preservice teachers a context for exploring the nature and origins of their initial conceptions of teaching, and for recognizing how their conceptions are influencing what they know and can come to know about teaching during teacher education.

Students enrolled in two sections of the Introduction to Elementary School Teaching course (N = 60) were asked to participate in this study. Thirty-eight traditional and twenty-two nontraditional elementary preservice teachers voluntarily participated in this study. Participants who had entered WSU's teacher education program soon after graduation from high school, and who had limited prior work or parenting experiences were categorized in this study as traditional (see Table 2, page 37). Students who had been at home raising children, or who were making a clearly defined career-change to teaching were considered nontraditional (see Table 2).

All traditional elementary preservice teachers were women and three were mothers, each having one child. No traditional student had obtained a college degree. This group's prior work experiences were limited to part-time and summer employment (e.g., part-time sales, waitressing, substitute teaching, working for day-care centers and

babysitting). Seventy-seven percent of this group had decided to become teachers while they were students in elementary school.

Table 2. Characteristics of Traditional and Nontraditional Preservice Teachers

	n	Average age	Percentage with degrees	Percent with children
			None	
Traditional	38	21.5	100	7
Nontraditional	22	32.5	100	64

Twenty-two nontraditional elementary preservice teachers participated in this study, six of which were male and sixteen were female. Both genders of nontraditional students expressed similar reasons for self-selecting teaching later in life. Some of those reasons included having summers off for recreation or being with family members, and better working conditions and salaries. This group mentioned other benefits from becoming teachers, including better insurance and retirement programs and increased job satisfaction. Fifty-eight percent of nontraditional students said that becoming a teacher was a life-long goal they had deferred because of family responsibilities, lack of money for tuition, and other financial, emotional, and occupational responsibilities that prevented them from entering teacher education sooner in life. Their work experiences included military service, substitute teaching, secretarial and restaurant work.

Data Collection

Prior to data collection, the researcher obtained approval from the Human Subjects Research Office at Western State University to conduct the study. On the first day of the semester preservice teachers in both introductory classes were asked to complete an autobiographical questionnaire³ (Powell, 1992) that provided the researcher with data about each participant's age, years of schooling, and prior work experience. In addition, autobiographical surveys provided information about participants' marital and family status, academic histories, and about family members who were or are teachers. This information was used to (1) categorize participants as either traditional or nontraditional preservice teachers according to their age and prior work experience, and (2) to provide the context for exploring the relationship between prior experiences and teaching schemata during data collection.

Following the completion of the autobiographical surveys, participants were given instruction on how to make a concept map (Beyerbach, 1988; Clark & Peterson, 1986; Clark & Yinger, 1987; Tochon, 1989; Yinger, 1987). Concept maps are clusters of words that illuminate teaching schemata by graphically arranging terms used to describe teaching

³See APPENDIX III for example of autobiographical questionnaires.

into hierarchical interrelationships⁴ (Beyerbach, 1988; Powell & Riner, 1991; Tochon, 1990). By discussing the terms included on participants' concept maps, and the positioning of those terms, prospective teachers' overall conceptions of planning and teaching can be explored (Kagan, 1990).

The validity of using concept maps to explore preservice teachers' thought processes during lesson planning and presentation has been documented elsewhere (Bennett & Powell, 1990; Beyerbach, 1988; Morine-Dershimer, 1989; Powell, 1991; 1992; Powell & Riner, 1991). Following group instruction about the purposes of concept maps, and after constructing one map as a group, the investigator asked each participant to individually develop a concept map of teaching. Participants were told not to seek help from or give assistance to classmates during the construction of the maps. Concept maps needed to reflect participants' own thinking about teaching in order to explore their individual teaching schemata. Students were given twenty minutes to complete their concept maps.

Participants were next instructed to plan a five minute peer lesson to be presented during the first two weeks of the semester. Participants were told that they would be videotaped teaching a five minute lesson on any subject they felt would be appropriate for an elementary classroom

⁴See APPENDIX I for examples of participants' concept maps.

setting. They were also told that the purpose of planning and presenting peer lessons was to illuminate their knowledge of planning and teaching. The construction of concept maps and presentation of peer lessons were both required activities for the introductory course; neither was graded.

During stimulated recall and concept map interviews, students were given the option of having their comments recorded and included in the study. If students did not wish to participate in the study, their comments were not recorded. By not grading peer lessons, concept maps, or interviews the researcher attempted to reduce student anxiety and concerns about having their course instructor interview them early in the semester. Moreover, all students were given the option of having their interviews recorded and deferring their decision to participate in the study until after the interviews were completed. These measures were designed to encourage student participation in the study by making it as non-threatening as possible. Ultimately, all students in both introductory courses gave the researcher permission to include their comments in the study⁵.

The researcher assumed that prospective teachers would develop their peer lessons using schemata that were highly

⁵See APPENDIX II for copy of consent form given to students at the beginning of each interview.

idiosyncratic and influenced by prior experiences. Thus, students were asked not to seek outside help in planning and presenting their lessons. Participants were to rely upon their own knowledge and prior experiences to inform their planning and teaching and not upon the ideas or expertise of others. Furthermore, peer lessons were taught early in the semester so that participants' schemata would not be influenced by research-based teaching strategies discussed during the introductory course.

Within forty-eight hours after teaching their individual peer lessons, participants met with the researcher in a stimulated recall interview. The interviews were conducted soon after participants taught their peer lessons to ensure that they could more easily recall their thinking during their lesson planning and presentation. The researcher began each stimulated recall interview by showing videotaped segments of individual participants' peer lessons and asking them to describe their thinking during the planning and teaching of the lesson segment (Clark & Peterson, 1986; Nespor, 1985; Shavelson & Stern, 1981). This strategy aligned with Conner's (1978) assertion that stimulated recall interviews of peer lessons allowed participants to relive the lesson, the context of the lesson, and to provide, in retrospect, some account of their original thought processes prior to and during the lesson. By reviewing segments of their individual lessons,

participants' thoughts about their planning and instructional behavior during peer lessons were explored and interpreted as evidence of classroom interactive dimensions of teaching schemata (Powell, 1992).

Classroom interactive dimensions of teaching schemata were defined in this study as critical points of strategic planning during peer lesson (Bennett & Powell, 1990). While videotaping peer lessons, the investigator noted critical points in each lesson that gave evidence of either strategic planning prior to or impromptu decision making during each lesson. From the researcher's observations, critical points in each lesson were noted and later shown to participants during stimulated recall interviews. Critical points of strategic planning included how participants phrased questions during peer lessons and how they began or closed their lessons. Critical points of strategic planning also included participants' use of visual aides, instructional materials, teaching voice, lesson presentation methods, and ways of responding to students during peer lessons. Moreover, the researcher observed that some students made clearly defined changes in their peer lessons as they were teaching. These changes were noted and discussed during stimulated recall interviews, and were also interpreted as evidence of classroom interactive dimensions of teaching schemata.

After viewing critical points of strategic planning during stimulated recall interviews, the investigator individually asked participants to discuss why they had selected a particular teaching strategy and what influenced their decision to use it. These questions were intended to probe how prior experiences had influenced participants' thinking about lesson planning and presentation. The validity of using stimulated recall interviews to explore preservice teachers' thinking during planning and teaching has been reported elsewhere (Calderhead, 1981; Conners, 1978; Housner & Griffey, 1983; Nespor, 1987; Peterson & Clark, 1978; Powell, 1991, 1992; Powell & Riner, 1991; Shavelson & Stern, 1981).

The final segment of each interview was designed to explore participants' schemata of teaching as evidenced by the terms included on their concept maps of teaching (Beyerbach, 1988; Morine-Dershimer, 1989). In this study, concept maps illuminated participants' reflective/introspective dimensions (RID) of teaching schemata reported by Powell (1992). RID's were defined as participants' overall thoughts about learning and learners and their more philosophical ways of thinking about teaching.

During concept map interviews, participants were asked to (1) define the terms they included on their concept maps, (2) provide an example of how each term related to teaching, and (3) give an experience that taught them to connect the

terms they individually used to describe teaching with their own conceptions of teaching. For example, some participants included the term "love" on their concept maps of teaching. Participants were then asked to define love and explain how love and teaching were related concepts. Lastly, participants were asked to provide an experience that led them to conclude a relationship between their definitions of teaching and love. This questioning protocol illuminated participants' initial conceptions of teaching and linked early influences and prior experiences to those conceptions. All interviews were audiotaped and transcribed.

In summary, stimulated recall interview transcripts, concept map interview transcripts, and observations of peer lessons were appropriate methods for this study. First, their validity in exploring schemata is well established. Second, they provided triangulation (Matthison, 1988) of data necessary for establishing trustworthiness (Lincoln & Guba, 1985) in qualitative research. Third, they established an interviewing context for exploring the influence of prior experiences on teaching schemata. Fourth, they generated data that were self-reported by participants and not inferred by the investigator (Wolcott, 1990). Finally, these methods combined to establish credibility (Lincoln & Guba, 1985) in the study by reporting data from several sources of information (Yin, 1991).

Table 3 Four Categories of Prior Experience and Knowledge

<u>Category Number</u>	<u>Name of Category</u>
1	Schooling Experiences
2	Personal Features
3	Life Experiences
4	Content Knowledge

Data Analysis

Data analysis consisted primarily of coding interview transcripts into one of four categories (see Table 3) of prior experience and knowledge reported by Powell (1992). In a similar study of secondary preservice teachers, Powell (1992) developed a coding instrument that identified and categorized secondary preservice teachers' prior experiences and knowledge about teaching into four categories and twelve⁶ subcategories of prior experience and knowledge (see Table 1., p. 13). The coding instrument was selected for this study because the researcher believed that an a priori set of categories developed by Powell (1992) at the secondary level would be comprehensive enough to guide data analysis of elementary level preservice teachers. Moreover, the instrument was used because it has established reliability and validity (Strauss & Corbin, 1990).

During data analysis, statements from elementary preservice teachers' stimulated recall and concept map

⁶A thirteenth subcategory was added during this study (i.e., Interactions with children who are not participants' offspring).

interview transcripts were coded and placed into one of the categories and subcategories of prior experience. The researcher coded each statement according to its similarities to definitions of each category. When participants would give lengthy explanations about a single event or person, and when they would mention the event or person several times before moving on to a new thought, the references to the event or person were counted as only one reference to a category.

Following procedures used to establish validity in the coding instrument (Powell, 1992), the researcher trained an elementary school teacher to analyze the data in order to establish interrater reliability, and to ensure more accurate interpretation of the data (Borko, Lalik, & Tomchin, 1988; Miles & Huberman, 1984).

Table 4 (p. 47) shows the percentage of interrater agreement for each of the ten transcripts coded for interrater reliability. Both coders held long discussions about the nature of the data and how the data aligned with the categories (Goetz & LeCompte, 1984) developed for secondary students (Powell, 1992). The initial percentage of agreement for each transcript was unacceptable to the researcher and a forced agreement ensued. A forced agreement consisted of having the researcher and the elementary school teacher talk through each line of each

Table 4 Percentages of Interrater Agreement

Percentages of agreement				
Coding Event Number:	<u>Initial Agreement</u>		<u>Forced Agreement</u>	
	Peer Lesson	Concept Map	Peer Lesson	Concept Map
1	69	71	84	82
2	63	78	86	85
3	60	64	92	90
4	66	55	89	94
5	78	85	93	96
6	72	78	89	95
7	76	68	96	93
8	81	77	91	89
9	64	73	94	97
10	76	69	91	98
Average Percentage	70.5	71.8	90.5	91.9

transcript coded until agreement was reached. Through much discussion of the data and of the definitions of each category, an acceptable percentage of intercoder agreement (i.e., ninety and ninety-one percent) was obtained for RID and CID.

Because the data analysis instrument was developed to reflect categories of prior experience and knowledge of secondary preservice teachers, the researcher hypothesized that differences in the types and qualities of categories for elementary preservice teachers may require some revision of the coding instrument. Both coders agreed that one additional subcategory of prior experience was needed and another should be expanded. Specifically, a subcategory was

needed that included elementary preservice teachers' experiences with young children who were not their offspring. The researcher and the elementary teacher inductively generated (Corbin & Strauss, 1990; Strauss, 1987) one additional subcategory named "interactions with children who are not offspring," and broadened the definition of the "personal needs" subcategory to include intrinsic factors such as a need to fulfill life-long dreams, to increase self-esteem, or to save children from poor teaching or from other worldly influences.

In addition, statements belonging to the "beliefs about students" subcategory and "beliefs/value systems" subcategory were not easily distinguishable given the definitions established in the original study. Ultimately, both coders determined that if a statement referred specifically to students in classroom contexts it should be coded as "beliefs about students." If a statement discussed learning, but did not specifically mention students in a classroom setting, the statement was considered more general and philosophical and was coded under "beliefs/value systems." After both coders agreed upon the nature of the changes, data analysis continued.

Stimulated recall interview transcripts and concept map think aloud interview transcripts were coded separately because they illuminated different features of participants' teaching schemata (i.e., classroom interactive and

reflective/ introspective). Powell (1992) reported that stimulated recall interview responses provided evidence of participants' classroom interactive dimensions of teaching schemata (CID). CID were evidenced as participants used strategic points of planning and instruction during their peer lessons, as noted above.

After viewing critical points of strategic planning from videotaped recordings of peer lessons, participants were asked to identify the origins of their planning and teaching behavior. Exploring the origins of their planning and teaching behavior provided participants with an opportunity to link their instructional behavior with a prior experience. Participants' own statements about the origins of their instructional behavior during peer lessons were transcribed and coded into the appropriate category and subcategory of prior experience.

Conversely, concept map interviews explored participants' more reflective/introspective dimensions of teaching schemata (RID). RID's were evident in participants' more general, philosophical concepts of teaching that influenced the selection of terms included on their concept maps of teaching. Concept map and stimulated recall interviews provided respondents with a context for self-reporting data from which the nature and origin of their teaching schemata were determined (Powell, 1992).

During data analysis, responses from stimulated recall and concept map interview transcripts were compared to categories of prior experiences and prior knowledge reported by Powell (1992). When participants' statements aligned with definitions from one of the subcategories of prior experience and knowledge the statements were assigned to that subcategory. Autobiographical surveys were not coded, but were used to establish the context for exploring the relationship between prior experiences and teaching schemata.

The data were also analyzed for patterns of responses that were inductively generated into themes (Strauss, 1987). Themes represented overarching concepts or theoretical foundations in this study that were inferred by the researcher from the data (Merriam, 1988). Following principles of axial coding reported by Strauss & Corbin (1991), and used by Powell (1992) in developing the coding instrument, the researcher generated the themes reported in chapter four. Specifically, the researcher explored how participants' statements in each category were similar or different from those in other categories. Drawing upon the researcher's theoretical sensitivity (Strauss, 1987), and by comparing statements within each category, the researcher intuitively developed one theme from schooling experiences, personal features, and life experiences categories that seemed to the researcher to illuminate how prior experiences

within each category influenced both groups' schemata of teaching. Transcripts were then coded for evidence of each theme, and participant statements were used to increase the validity of each inductively generated theme.

Themes were useful in reporting the data in this study in three ways. First, they provided a means of comparing categories for generating theory about the influence of prior experiences on teaching schemata. Glaser and Strauss (1967) noted that comparing differences and similarities in categories, their properties, and their interrelations forces the investigator to develop more comprehensive theory (p. 47). Second, they illuminated patterns of responses for developing theory that were tied together by multiple, not single references to subcategories (Merriam, 1988). Third, they built a logical chain of evidence for integrating all themes into a coherent whole that made more salient the influence of prior experiences on schemata.

In summary, methods used in this study have documented validity in exploring teaching schemata. These methods generated data for exploring the influence of prior experiences on peer lessons and concept maps. Furthermore, examining schemata from two dimensions (i.e., classroom interactive and reflective/ introspective), provided more than one source of data for exploring the influence of prior experiences on teaching schemata. Multiple sources of data increased the credibility of reporting these findings.

Assumptions

Assumption 1: Differences in Teaching Schemata

The researcher assumed that traditional and nontraditional students' teaching schemata would be influenced by different categories of prior experiences (Bullough & Knowles, 1990; Powell & Riner, 1991; Powell, 1992). The researcher further assumed that traditional preservice teachers' peer lessons and concept maps would primarily be influenced by former schooling experiences and beliefs about students. In addition, this investigator assumed that nontraditional students' peer lessons and concept maps would primarily be influenced by prior work, parenting, and other life experiences unrelated to K-12 classroom experiences.

Assumption 2: Influence of Family Experiences on Schemata

Family experiences are strong influences on schemata (Livingston & Borko, 1989). Therefore, the researcher assumed that family values and beliefs would be a salient influence on traditional and nontraditional preservice teachers' knowledge of planning and teaching. The researcher assumed that strong family values would lead participants to view teaching as a process of establishing personal values and developing family-like relationships based on love and mutual respect.

In addition, sixty-four percent of nontraditional participants were parents. The investigator assumed that

peer lessons and concept maps would be influenced by generalizing knowledge about children gained from parenting experiences to school settings. Accordingly, the researcher assumed that parenting experiences would be primary influences on nontraditional preservice teachers' knowledge of teaching and planning.

Assumption 3: Influence of Prior Work on Schemata

The researcher assumed that prior work experiences (e.g., personnel management, organization skills, interpersonal skills and work habits) may be primary influences on nontraditional students' teaching schemata. Moreover, the researcher assumed that both groups may be able to use knowledge gained from prior work experiences to inform their planning and instruction of peer lessons.

CHAPTER 4

RESULTS

Introduction

Chapter four presents findings on the influence of prior experiences on teaching schemata of traditional and nontraditional elementary preservice teachers. The findings of this study are reported using narratives based on description and interpretation of the data, and using descriptive data from content analysis of interview transcripts (Strauss & Corbin, 1991).

Since there are no established guidelines for achieving a balance between description and interpretation in qualitative research (Merriam, 1988), the researcher organized this chapter in the following manner. First, each category and subsequent subcategory is briefly defined. Second, student responses are presented in order to illuminate how categories and subcategories influence schemata. Student responses are interwoven with analytical commentary about the nature of the responses. Additional information is included to add clarity and meaning to the interpretation of the findings.

After reporting statements that illuminate the influence of each category and subcategory of prior experience on participants' schemata, the researcher presents four themes that have been generated from the data

(Strauss, 1987). The use of themes elevates data analysis to a more theoretical conceptualization of the data (Merriam, 1988). Each theme was generated from the researcher's analysis of student statements in each category.

Category One: Schooling Experiences

Traditional and nontraditional students' peer lessons and concept maps of teaching were influenced by memories of experiences with former K-12 classroom teachers and by university and teacher education coursework. Both groups had spent years in K-12 classrooms making sense out of their experiences as learners. Traditional and nontraditional students had also completed various college courses prior to enrolling in the introductory course at WSU. These schooling experiences generated knowledge about teaching that influenced both groups' planning and teaching of peer lessons and their construction of concept maps of teaching.

K-12 Experiences

Former K-12 schooling experiences were the second most noted influence on traditional students' peer lessons and concept maps (see Table 5). Nontraditional students' peer lessons and concept maps were also influenced by experiences with former K-12 classroom teachers. Given that traditional students had recently graduated from high school, former K-12 schooling experiences were a primary influence on their schemata of teaching. The following

examples illustrate how former K-12 schooling experiences influenced prospective teachers' conceptions of learning and learners.

Table 5 Percentages of References to Categories

Percentages of References to Prior Experiences and Existing Knowledge that Influenced Traditional and Nontraditional Elementary Preservice Teachers' Peer Lessons (CID) and Concept Maps of Teaching (RID)^a

Categories	Percentages of References							
	Stimulated Recall (CID)				Concept Map (RID)			
	TPST %	f	NTSP %	f	TPST %	f	NPST %	f
1. SCHOOLING EXPERIENCES								
K-12 experiences	17.8	82	7.9	21	21.9	142	5.4	22
College experiences	5.4	25	4.1	11	2.0	14	1.5	5
Teacher education	4.5	21	2.9	7	1.1	8	2.7	8
2. PERSONAL FEATURES								
Personal needs	3.0	14	4.8	13	3.5	24	7.7	29
Belief/value system	12.8	59	13.4	37	38.7	261	37.7	142
Personal learning style	6.9	32	1.4	5	1.4	9	1.8	7
Beliefs about students	22.7	105	23.5	64	14.5	97	18.3	69
3. LIFE EXPERIENCES								
Prior work	6.5	30	9.7	26	6.4	43	7.7	29
Nonclassroom teaching	1.5	7	6.7	18	2.5	17	6.4	24
Relatives	4.7	22	2.6	8	4.5	30	1.3	5
Parenting experiences	1.3	6	12.7	35	0	0	6.2	25
Interactions with children	4.1	19	3.3	3	2.7	17	2.5	11
4. CONTENT KNOWLEDGE								
Knowledge of subject	8.4	39	6.3	18	0.89	6	0.79	3
Total	100	461	100	267	100	668	100	397

^aN = 38 traditional preservice teachers (TPST), N = 22 nontraditional preservice teachers (NPST)

^af = frequency of responses to category or subcategory

During her peer lesson, Mary, a traditional student, emulated her fifth grade teacher's instructional style. She noted:

My fifth grade teacher taught everything basically like that. Everything was drawn and demonstrated on a chalkboard. It's a lot better than having it just presented to you without being shown to you.

Mary's primary reason for emulating her fifth grade teacher stemmed from her relationship with him. Because, as she put it, he "loved me to death," Mary thought to honor him by "being the kind of teacher he was." Mary claimed that other aspects of her lesson (i.e, her speaking voice, treatment of students) were also influenced by him.

While Mary's lesson was influenced by positive memories of a former teacher, Beth's peer lesson was influence by negative memories of many teachers. She said that none of her former teachers ever praised her efforts in school. Accordingly, every student response was praised (e.g., "good question" or "nice thinking") during her peer lesson. She explained:

No one ever praised me in school; and therefore, I think I had a low self-esteem growing up. I don't think I was told, "Wow! What a good answer," or "You did such a good job." If students did something good I told them, and if they do something wrong I will tell

them it's not quite right so I encourage, not discourage, them.

Experiences with former K-12 classroom teachers also influenced the selection of terms included on traditional students' concept maps of teaching. Sally, for instance, included the term "understanding" on her concept map of teaching to describe how her fourth grade teacher helped her cope with a relative's death. Tearfully, and overcome with emotion, she recalled how the loss of her grandmother had left her with unanswered questions about life and death. Not until Sally's fourth grade teacher explained her philosophy of living and dying was Sally able to find some solace in her grandmother's death. She noted:

Teachers have to have understanding of what a child is going through or they are really not there for the students. I remember when my grandmother died. My fourth grade teacher took me aside and explained what death is. She told me that my grandmother was gone, but she'll always be there. She helped me understand what no one else could. Not even my parents could do that.

Tera used the word "devoted" to describe her high school journalism teacher. Every Sunday her teacher would go to school to meet with her students. Often, Tera would meet her teacher on weekends and discuss classwork and personal issues. To Tera, this teacher became the

personification of devotion and a model for her to emulate when she assumed the role of a teacher. The "devotion" of her former teacher led Tera to say:

Teachers who only work from seven until three aren't interested in their students. They're not interested in their students' personal lives. As far as I am concerned, education can do without them. I remember how my journalism teacher would come to school on weekends. She would come each Sunday and help us with our assignments, and we would talk about everything. She was my friend. She was devoted to us. She really cared.

Jessica included the term "diligent" on her concept map. When asked what diligent meant in the context of teaching she said, "I don't know how to define it, but I have seen it in my teachers. It's just something everyone knows. It's common sense."

Nontraditional students' memories of former teachers stemmed from similar kinds of schooling experiences. For example, Leona recalled how two former high school teachers influenced her thinking about teaching. During her stimulated recall interview Leona said:

I had two English teachers that were incredible. I just totally loved them. They were different because they didn't put up with any garbage. As a result, we read, we learned, and we spoke in turn. There was

never any out-of-your-seat, or talking or anything like that. Those were the teachers I like and tried to be like when I was teaching.

During her concept map interview, Gayle recalled how the memory of one former high school English teacher influenced her use of the term "shaping" on her concept map. While discussing the term Gayle said:

I remember an English teacher. She bent over backwards to make sure that I was doing a good job. She would praise me for the things I was doing. This shaped me and made me want to do more for her. Teachers shape their students when they show how much they care about them.

Another student, Geri, remembered how caring teachers helped her overcome the effects of a childhood filled with problems and sad memories. Because former teachers acted in ways that helped Gayla feel "cared for and loved," she worked harder in school to please them. In accordance, she included the term "love" on her concept map. She said:

I didn't have the kind of childhood I wanted and my teachers gave me an emotional base and a psychological base to lean on. I could go to them any time and talk with them. They would listen to me and I would learn from them. They made me want to try harder.

Gayle thought of her former teachers as "friends who knew how to care about students." Because of her experiences

with former teachers, Geri concluded that her primary role as a classroom teacher was to "develop a relationship with each student that lets them know that I care."

In using the term "giving," Dena typified both groups' overall recollections of former K-12 teachers, and the influence former teachers had on their views of thinking. She noted:

I've learned from teachers who are giving of their time, giving of their encouragement, and just giving of themselves that giving is an important part of being a teacher. I get so much from teachers who give that I hope to give back to students when I become a teacher.

College Experiences and Teacher Education

College experiences and teacher education were not primary influences on either group's development of peer lessons and concept maps (see Table 5). References to college experiences primarily centered upon two general education courses at WSU. Students in both groups had taken WSU's general education math and communications course prior to enrolling in the introductory course. The influence of these courses on both groups' peer lessons is typified by Thelma, a traditional preservice teacher, who said:

I stood behind the table during my lesson because of my communications class. I felt comfortable behind the table because in communications we had to stand behind this thing for the speeches. And we had to project our

voices. So, I was more comfortable teaching like this. I learned a lot from the class.

LeAnn said that she learned from the communication course to keep eye contact and to vary her speech tones when speaking in public. She used this knowledge during her peer lesson. Nontraditional students' peer lessons were influenced by WSU's communication course in similar ways. According to Jerry, "I learned from my communication course that I need to talk more with my mouth and less with my body." Letting this knowledge work for him, Jerry stood in one place and kept his hands at his side throughout his peer lesson.

WSU's general education math course provided both groups with lesson materials and teaching strategies during their peer lessons. Leona said, "I taught a math trick that I learned from my math class because I didn't know what else to teach." Another student, Deann, used candy to teach addition. She learned from her math class the "importance of using manipulatives to get their interest."

Table 5 shows that teacher education was the least referenced subcategory in the category of schooling experiences for both groups. Given that the introductory class was the first teacher education course offered at WSU, both groups' lack of reference to this category is an expected finding, aligning with findings reported by Powell (1992). Nonetheless, traditional and nontraditional

students' peer lessons and concept maps were influenced by teacher education.

Francine, for example, claimed that her teaching style resulted from observing other students teaching their peer lessons. During her peer lesson, she varied her voice tones because she had seen others in the introductory class do the same when they had taught. She said:

I was watching one student teach last Thursday. I could hear how when he talked his voice went up and down like he was talking to children. I felt a bunch of them were doing that. So I decided that's how I should teach.

Todd remarked that he wasn't sure what to teach during his peer lesson. He said that "every time I'd come up with a good idea someone else would teach it."

Three traditional students, Shannon, Winnie and Margaret mentioned that the introductory course influenced their thinking during planning and presentation of peer lessons in a way worth noting. Specifically, each one admitted during their stimulated recall interview that they would have worked harder to prepare their peer lessons if the lessons had been graded or had been taught to children instead of adults. Shannon said, "I didn't take it serious at all. If we were actually teaching kids I would have planned a lot and done more things differently."

Summary of Schooling Experiences

Memories of former K-12 schooling experiences were important influences on both groups' peer lessons and concept maps. Whether recent or many years old, these experiences fabricated a template for teaching methods, speech patterns, questioning strategies, student/teacher interactions and expectations that were useful while planning and preparing peer lessons. Moreover, despite differences in prior experiences, age, marital and family status, and work experiences, the researcher noted little, if any, difference in the ways both groups taught their peer lessons. The years since graduation did not appear to diminish the influence of former teachers' affective and instructional behavior on participants' peer lessons and concept maps.

Category Two: Personal Features

Category two consisted of four personal features that influenced both groups' peer lessons and concept maps (see Table 5). Personal needs, personal beliefs and values about learning, personal learning styles and beliefs about students were primary influences on traditional and nontraditional students' schemata of teaching. These features, which were viewed as personal features in the study, illuminated how teaching schemata contained knowledge that was grounded in personal experience, and in the

individual meanings and beliefs that are interpreted from prior experience.

Moreover, personal features made salient how some schemata of teaching are influenced by personal needs to be met by teaching. For some participants personal needs influenced their conceptions of teaching, their instructional behavior, and how they perceived student/teacher relationships. Other students relied upon their own ways of knowing to develop a teaching style. Personal features illuminated the individualized nature of schemata.

Personal Needs

Both groups had personal needs that were met by becoming teachers. Although personal needs varied and were not always clearly defined, they influenced both groups' decisions to become teachers, how they framed instructional tasks, and how they conceptualized teaching. For example, Carrie decided to become a teacher because she said she "needed to try and save children from the evils of the world." Her religious background influenced her perception of social ills, how children may be influenced by those ills, and how her classrooms could be used to "teach kids how to make choices that will save them from some of life's problems." Thus, Carrie used her peer lesson as a forum for teaching her religious beliefs/values. She said, "I hoped

my lesson helped the students, even though they weren't real children, to see the value of making good choices in life."

For some traditional students, self-image was closely linked with their recent K-12 classroom experiences as students. Their self-worth was confirmed by teachers who were no longer a part of these students' daily lives after graduation. Since leaving high school, some participants had difficulty finding the praise and recognition that they had received as students. As a result, three traditional students told how they entered teaching to recapture the feelings of acceptance and love provided by former teachers. Sally, Emma and Liza said that becoming teachers would help them feel good about themselves. Sally's comments summed up the others. She noted:

Most of my self-esteem has come from teachers. I feel happiest when I am in school or around teachers. So, I spend a lot of time with my past teachers. I thought about going into other careers but just haven't had the passion for them like I have for teaching. Nothing else in life has given me the same feelings about myself as when I was in school. It's hard to explain. Being a teacher should help me feel like I used to.

Another student, Colleen, felt a deep sense of gratitude for former teachers who created a learning environment that was "safe and secure." Feeling safe and secure helped Colleen feel that "everything was under

control." Her gratitude stirred in her a personal need to do for other children what former teachers had done for her. She explained:

I want to create those feeling for other students by practicing the same guidelines my teachers practiced. I'd like to create a nice environment for them. For me, I would like to be the one helping the children. Being a teacher would help me get that comfortable and secure feeling again.

Personal needs also influenced nontraditional participants' decisions to become teachers. During her concept map interview, Tamera discussed the term "benefits" by saying, "One of the benefits of teaching is that I can be with my children when they are out of school." During her concept map interview, Nanette said, "The only thing I have ever done well is be a mother. Being a teacher will let me do what I do best, become a mother to my students." This statement illuminated Nanette's lack of understanding about the differences between teaching and mothering and revealed her personal need to find a career that she felt confident she could do well.

Francine said that her self-esteem had improved since becoming a mother. Prior to having children, she said that she did not like herself. Her children's love for her increased her feelings of self-worth. Francine hoped that

being with other peoples' children as a teacher would yield the same results. She explained:

Teaching is a lot like mothering. I am a good mother and so I will be a good teacher. My children have helped me feel good about myself. They've helped me begin to like myself. Maybe other children will love me as mine do. I have so many self-doubts. Being a teacher, and being with children, will help me get over them.

Gayla wanted to surround herself with other peoples' children for different reasons than those mentioned by Francine. Said Gayla, "I always wanted to have twelve children. We stopped at nine. As a teacher I will finally get my twelve children, even though they'll belong to someone else."

Like Francine, Leona and Todd were looking for increased self-worth by becoming teachers. During their stimulated recall and concept map interviews, each expressed the hope that teaching would raise their self-esteem. Leona said, "The kids love you unconditionally. Working with them won't be like working with adults. They will help me feel good about myself." Todd hoped that parents and students would appreciate his efforts as a classroom teacher. He said, "Teachers are respected. When I was in the military, I had lots of authority but I got very little respect. Maybe as a teacher, people will appreciate what I do."

Mark included the term "benefits" on his concept map of teaching. The inclusion of this term illuminated how some of Mark's personal needs influenced his desire to become a teacher. Specifically, Mark said that "after twenty-five years of teaching I can retire and golf all the time. Teaching will give me paid summers off so I can keep my game of golf from getting rusty." He added:

When you're a golfer, having summers off is a pretty good benefit. Summer will give me more time to golf. The pay is not that great, but my wife is also a teacher. Together we can retire with nearly a hundred-thousand a year pension and golf all the time.

Beliefs/Value Systems and Beliefs about Students

Both groups' peer lessons and concept maps were highly influenced by beliefs and values about learning and students (see Table 5). Participants' beliefs/values about learning and learners stemmed primarily from prior schooling, work, family, and religious experiences. Some beliefs were common among both groups and were taken-for-granted as common sense knowledge about teaching (Buchmann, 1987). Moreover, nontraditional students had more extensive life experiences. This group's life experience helped them develop understanding of the needs and nature of children. Traditional students' understanding of children was influenced primarily by personal interactions with children

or by generalizing theories of teaching based upon their own life experiences as children.

Nespor (1987) argued that beliefs reside in episodic memory of life experiences that influence how future events are interpreted and responded to. The findings of this study support this notion. For example, Brenda said, "Students are bored by teachers who don't love teaching. I never learned much from them either." This led her to conclude, "As a teacher you have to love your job or the students won't feel like they learn much." Martha said that she was always made to feel important in school. This led her to say, "Students are the most important thing in the classroom. If teachers help their students, they will feel special."

Shauna further illuminated how traditional preservice teachers' beliefs about students were generalized from personal experience. She used the term "trust" to describe her doubts about trusting adults, particularly teachers. Despite her belief that she had been "taken in too many times" by teachers, she hoped her students would trust her. Generalizing her own experiences and beliefs as common, she noted:

I don't trust adults. I have been taken in too many times. Especially by teachers who never praised me or made me feel that I was worth-while. I want my students to trust me. They should be able to come to

me and share any problems they have or tell me anything.

Personal beliefs/values about learning and learners influenced nontraditional students' perceptions of teaching in different ways. This group's extensive life experience made them more aware of others' needs. As a result, their beliefs/values about learning and learners went beyond generalizations of how students should be viewed or treated based upon their own experiences in school. During his stimulated recall interview, Ron said, "It is important to me that my students understand my religious beliefs and values." Devoutly religious, Ron sought to infuse his religious values and beliefs into his instruction. Time spent in the military had convinced him that "children have to face a lot of problems these days. They need a lot of love and guidance." Ron explained the kind of guidance he could offer children as a teacher. He said:

I want to help them see the world as I see it. I want to tell students things they can relate to. If they relate to you they can see things your way. I want students to see my side when they do wrong. Then, they will know right from wrong.

Ron's desire to guide children came from a confidence that he knew "right from wrong." His views of teaching were influenced by a knowledge of childrens' need for love and guidance, his religious beliefs and values and his prior

work experiences in the military. Ron illuminated how nontraditional students' more extensive life experiences helped them view the purposes of teaching in more complex ways.

Religious beliefs and values influenced other nontraditional students' peer lessons and concept maps. During her peer lessons, Brandie wanted to teach the value of sharing. Thinking that sharing was "too religious a topic to discuss in school," she read a book that was designed to teach the concept. She hoped that by reading the book the class would "get the point about sharing." Brandie noted:

When I went with the youth to church camp, I read this book and we discussed the importance of sharing. It is important to me to share, and I thought that if I read this story, I could share this belief with the class. People need to learn to share and make friends. It's important for everyone to know this.

Personal needs also influenced participants' beliefs and values about learning and learners and their planning and presenting of peer lessons. Those with strong religious beliefs, like Ron and Brandie, desired to share some of those beliefs with students. Participants who were more philosophically than spiritually oriented also sought to influence childrens' thinking with their views of life and living. For example, Leona believed that children should be

taught that "persistence in learning has its' own reward." This notion was expressed during her stimulated recall interview. Leona noted:

I am a positive person. I'd rather tell kids, "Hey! If you stay with it and stick it out and try to pull it out instead of just sliding along, something will turn out." I'd like everybody to leave me feeling like they might have learned something or that they almost got it.

Some students, like Thelma, taught lessons that were influenced by more practical beliefs. Because she believed that students should know when to dial "911" in an emergency, she devoted her five minute peer lesson to practicing emergency calls. Thelma's lesson was not influenced by religious or philosophical beliefs and values of life, but by a practical belief that "911 is something all children should know."

Personal Learning Style

The axiom "teachers teach the way they were taught" is widely accepted (Goodlad, 1982; Lortie, 1975). The findings of this study suggest that teachers also teach the way they learn. Personal learning styles, defined in this study as the ways prospective teachers learn new information, influenced both groups' peer lessons and concept maps (see Table 5). In this study, both groups consciously and subconsciously taught in ways they learned as students.

Thus, learning styles influenced both groups' peer lessons and concept maps.

During her peer lesson, Amy introduced the concept of sequencing and asked students to put in order of occurrence their morning activities prior to coming to school. Involving students in the lesson by linking curriculum with students' life experiences was important to Amy. She noted:

I taught it that way because I learn that way. I mean, if you don't apply what you are learning to everyday life it won't be remembered. It's so much easier for me to learn something when you apply it to something I can relate to in life.

LeAnn gave the class a quiz at the end of her peer lesson. The ideas of testing students came from her own experiences in school. She explained:

I have had many teachers who get up, say what they have to say and give a quiz. I identify with that because that is how I learn best. It forces me to concentrate if I know I am going to be tested.

Quizzing students after every lesson was a component of teaching that LeAnn did not question. Because it helped her learn, she generalized that all students learn more from a lesson if forced to concentrate in preparation for a quiz.

Wendy, like Pam and Jenny, did not plan her peer lesson. Pam and Jenny said they didn't care about the lessons because peer lessons weren't graded and weren't

taught to children. Wendy, on the other hand, chose not to plan her peer lesson for a different reason. She explained:

I don't learn by planning. I just get up and do it.
It makes learning and life more interesting that way.
That's how I planned my lesson. I plan by not
planning. What ever happens, happens, and I just roll
with it. It works a whole lot better for me.

Summary of Personal Features

Subcategories of personal features were referenced more than any other category for both groups (see Table 5). Participants' peer lessons and concept maps of teaching were influenced by personal needs, individual learning styles, and beliefs/values about learning and learners more than any other category of prior experience. Participants' beliefs/values about learners and learning were important sources of knowledge about teaching. Regardless of the appropriateness of those beliefs in classroom settings, regardless of the effectiveness of instructional strategies generated from those beliefs, participants' beliefs and values were of crucial importance to their teaching. Both groups' beliefs/values about learning and learners, as Dewey (1933) noted, "cover all the matters of which we have no sure knowledge and yet which we are sufficiently confident of to act upon" (p. 6).

Category Three: Life Experiences

Peer lessons and concept maps of teaching were also influenced by life experiences, including (1) prior work experiences, (2) nonclassroom teaching experiences, (3) relatives who were teachers, (4) parenting experiences and (5) interactions with children who were not offspring. These experiences extended prospective teachers' belief systems about learning and learners beyond memories of and personal reactions to experiences with former classroom teachers. Life experiences were important in helping prospective teachers to understand themselves and others, and in helping them adapt to the world and their place in it. Life experiences also generated meanings about life, children and teaching, and increased participants' expectations of themselves as teachers. These qualities were evident from prospective teachers' discussions of teaching during stimulated recall and concept map interviews.

Prior Work Experiences

Prior work experiences influenced both groups' peer lessons and concept maps of teaching. Because both groups appeared to be child-oriented, participants frequently selected part-time or full-time work positions teaching children in elementary-school classrooms, day-care centers and church summer-camps. These prior work experiences increased participants' knowledge of children as learners

and of effective teaching strategies. Furthermore, work experiences as office secretaries, restaurant hosts, hotel clerks, sales clerks and military personnel provided both groups with opportunities to develop and practice communication skills, human relations skills and teaching skills in various work settings. These skills were useful during peer lessons.

Monica and Kathryn, both traditional students, learned from working as camp counselors how their instructional voice tones influenced childrens' learning. Monica noted during her stimulated recall interview:

As a camp counselor, I learned to talk to them sweetly. If a person talks to me sweetly it builds my confidence and makes me feel more comfortable. If you talk straight to a kid you're just going to shy them out. Kids learn better if you talk to them right.

Kathryn also learned as a camp counselor how speaking to children influenced their learning. She used this knowledge during her peer lesson, noting:

I used an excited voice during my lesson because I learned at camp to use a voice that grabs attention. They don't listen to you if you just talk in a normal voice. If you just talk like I am talking to you, they won't listen. You need to perk up their ears.

Erin also learned the value of voice tone in administering praise to children while working as a life-

guard at a community swimming pool. She said, "I used to watch their faces as I would give them praise. If I used a really excited voice to praise them they would try harder."

Both groups' work experiences with children in instructional settings helped them understand some challenges classroom teachers typically faced. For example, the time Lila spent working as a teacher aide taught her, as she put it, " that highly intelligent children need guidance as much as regular kids." This notion surprised her. She explained:

When I first started being an aide, I would just assume they knew what I was talking about. I would say, "Okay now, do this and do that." After all, that was what the teacher said they were supposed to do. I would take the students aside and work with them. They were highly intelligent children so I assumed they would know what I wanted them to do. But it was like they didn't understand me. They would just sit there and ask what I wanted them to do. Just because they're highly intelligent doesn't mean you don't have to explain everything that you want them to do.

Not all nontraditional students had prior work experiences with children. Time spent in the military giving instruction to his troops influenced Todd's peer lesson. These experiences taught him the importance of

maintaining high levels of student interest during instruction. He noted during his peer lesson:

I tried to pull the students into the lesson because I learned in the military that you have to try and keep everybody interested. If you make the lesson light you get people talking who otherwise would just sit and listen.

Todd used this knowledge to his advantage during his peer lesson. The pace of his lesson, and his personal teaching style kept students involved and highly interested throughout his lesson.

Not all prior work experiences in school settings influenced prospective teachers' conceptions of teaching in positive ways. Debra, a nontraditional student, had substitute taught for three years prior to enrolling in the introductory course. During that time Debra experienced, as she put it, "some extremely negative and overwhelmingly depressing experiences." These experiences led Debra to say during her stimulated recall interview:

In a perfect world, I would love to be a teacher. In a perfect world, it would be a delicious challenge. But I have learned from substitute teaching that so many kids have serious problems that the cards are stacked against teachers.

Leona, another nontraditional student, also worked as a substitute teacher. Unlike Debra, Leona's experiences in

classroom settings increased both her confidence as a future teacher and her self-worth as a person. She noted:

Substituting has been wonderful. I go home and tell my husband all about it. I feel like I might be making some changes in kids lives. They come to school with an awful lot of baggage. You have to take that into consideration while teaching. Working with kids is so uplifting. I go home feeling so good about myself as a person and as a teacher.

Both Debra and Leona had similar prior work experiences as substitute teachers; however, both came away with very different views of teaching and of students. Leona saw students' classroom behavior as part of the "reality of classroom life that made teaching challenging and rewarding." With Debra, student behavior led her to say, "I am having to force myself to do this. I just don't see much success being a teacher, because I would feel responsible for every child's learning."

Nonclassroom Teaching

Nonclassroom teaching experiences influenced the peer lessons and concept maps of nontraditional students more often than traditional students (see Table 5). Examples of nonclassroom teaching experiences included church teaching and private tutoring of dance, music, and crafts. These experiences influenced participants' predispositions of teaching by providing them with a context for testing their

own theories of teaching with children in actual teaching contexts. Participants used their ideas and beliefs about teaching gained from nonclassroom teaching experiences to inform their peer lessons. They also believed that their life experience had already prepared them to be better instructors than former teachers. Some participants believed their nonclassroom teaching experiences had given them the attributes most important to successful teaching and missing in education. As a result, participants' beliefs resulting from nonclassroom teaching experiences were important influences on their teaching schemata.

While working as a volunteer teacher at a day-care center for her church, Clara became highly optimistic about her ability to become a caring teacher. Remembering her former teachers' lack of caring, Clara said:

Working at the day care center taught me the importance of showing children you care and that you are there for them. I didn't see enough of that in my teachers. They weren't doing enough for me to show they really cared. Working at the day care helped me see that I am more caring already than most of my teachers have been. I know I will be a better teacher than many of them.

Clara's belief that she was more caring than former classroom teachers, and therefore would be a more effective teacher, illuminated how some prospective teachers overvalue affective classroom behavior and underemphasize cognitive

behavior. Similar findings were reported by Weinstein (1988, 1989).

Nonclassroom teaching influenced prospective teachers' concepts of teaching in favorable ways. For example, Mark, a nontraditional student, included the term "knowledge" on his concept map of teaching. His definition of knowledge was influenced by experiences as a church scout master. He said:

I know from watching my scouts come in knowing nothing and leave knowing what I wanted them to learn that the bottom line of teaching is acquiring new knowledge and creating learning environments where students can learn for themselves.

Watching boy scouts learn from his teaching increased Mark's confidence that he would be "good with kids and able to help them learn."

Gayle learned while teaching Sunday School that "you have to help students see the road you want them to go down, otherwise they will go down a different road from what you want them to." Another nontraditional student, Ron, had views of teaching that were influenced by being a church teacher. He said, "I want children to see the world as I do, and to see right and wrong as I see it." Knowing what was right, and going down the right road, were beliefs about the purposes of teaching that stemmed from teaching in religious settings.

Relatives

Relatives who were teachers influenced traditional and nontraditional preservice teachers' peer lessons and concept maps. Specifically, traditional and nontraditional students adopted notions of teaching held by relatives in the teaching profession. For example, Brandie, a traditional student, emulated her mother's teaching style during her peer lesson. She noted:

That's how my mom does her spelling and vocabulary lessons. She has the kids come up with the sentences. If they are wrong, she gives them help and encouragement. All the lesson was the way I have watched her do it.

Conversely, Tabatha's mother taught junior high school for twenty years. During that time, she watched her mother teach and listened to her complain about it. Tabatha's mother has tried to discourage her from becoming a teacher by using negative stories of classroom events and experiences with students. Instead of developing negative images of teaching, she developed negative images of her mother as a teacher. During her stimulated recall interview she noted:

She hates teaching. She hates kids. That's one of the reasons I want to become a teacher, because she's one of these teachers that doesn't care about students. She's only there to get her paycheck.

Tabatha developed views of teaching that were independent from her mother's. Because Brandie's were not, she may need help developing more independent views of teaching. Emulating relative's teaching behavior, while not necessarily inappropriate or undesirable, doesn't encourage independent thinking about the rationale for selecting instructional behavior.

Parenting Experiences

Parenting experiences influenced seventy-one percent of participants' peer lessons and concept maps (see Table 5). Experiences with their own children influenced participants' thinking about teaching during peer lessons and concept map interviews. Specifically, the belief that being a good mother was synonymous with being a good teacher was common among nontraditional students who were mothers. In accordance, mothers who referred to parenting experiences during stimulated recall and concept map interviews viewed their future classrooms as extensions of home and their primary responsibility as teachers was to mother children. Gayla's comment that she will finally get the "dozen children" she had always wanted illuminated how some nontraditional students could not delineate clear boundaries between being mothers and being teachers. While only three traditional students were parents, this group of mothers expressed similar feelings.

For example, prior to becoming a mother, Melanie said that she did not like children and was never going to become a mother. However, after giving birth to her daughter two years ago she discovered a love for children that she claimed was her impetus for becoming a teacher. During her stimulated recall interview she noted:

I hated children when I was growing up. I wouldn't even babysit them. I had no use for them. Then I had my own child and discovered that I actually enjoy them. I even started liking other peoples' children. Now I want to always be around kids. That's why I want to teach.

Being a mother also motivated Francine, a nontraditional student, to become a teacher. Speaking metaphorically, she claimed that she "began living the day my first child was born." She too believed that being a teacher was like being a mother. According to Francine, "I am a good mother, so naturally, I know I'll be a good teacher." Nanette, Penny, and Gayla also said that their parenting experiences had prepared them to become teachers. As reported earlier in this chapter, Nanette said that being a mother was the only thing she could do well and that being a good mother would help her be a good teacher. After spending time in her child's classroom helping the teacher, Penny said about students, "They're like my own kids. I'll do just what I do at home." Gayla said, "Teaching is

mothering. Now I'll just have more kids to mother." Clara also viewed teaching as a form of mothering. Although she was not a mother, Clara claimed, "Since I know I will be a good mother, I know I will be a good teacher."

Interactions with Children

Traditional students' peer lessons and concept maps of teaching were influenced by experiences with others' children (see Table 5). Experiences with cousins, nieces, nephews and younger siblings influenced prospective teachers' understanding of learning and feelings toward learners.

For example, Naomi, a traditional student, taught her peer lesson on why humans have skin. Her topic resulted from an experience she had with two of her nieces. She noted:

My nieces and I were watching Sesame Street. They did a thing on skin. They said the purpose of skin was to keep your insides from falling out. My nieces thought that was cute, so I decided to teach it.

Time spent with her niece and nephew influenced the selection of terms Mary included on her concept map of teaching. Specifically, she used the term "acceptance" to describe her relationship with her sister's children. Mary noted:

They are the reasons I am going into teaching. I took care of my nephew while my sister worked and my

brother-in-law blew cocaine up his nose. I raised my nephew for the first three years of his life. Then my sister had a baby girl who didn't like me. Every time she would see me, she would scream. When my sister got divorced, my niece and nephew moved in with us and drove me nuts. Then I started to learn that they were just kids and began to love them to pieces. They accepted me, and I accepted them.

Summary of Life Experiences

Life experiences influenced traditional and nontraditional preservice teachers' peer lessons and concept maps in four important ways. First, they influenced prospective teachers' knowledge of teaching, students, and human relationships. Second, they increased prospective teachers' self-confidence in their teaching abilities. Third, they provided a context in which prospective teachers could experiment with teaching methods in a fail-safe setting. Fourth, they helped prospective teachers develop and articulate personal theories of teaching that balanced the needs of others with their own in instructional settings.

Category Four: Content Knowledge

In this study content knowledge was viewed as the knowledge gained from personal experience in and away from school settings and used as subject matter during peer lessons. Table 5 shows that for both groups, their peer

lessons were more influenced by content knowledge than were their concept maps. Specifically, content knowledge influenced what participants taught and how they taught their peer lessons. Content knowledge was not a primary influence on either group's concept map of teaching (see Table 5).

When content knowledge was mentioned, statements like Donette's were common. During her stimulated recall interview she spoke of her love for arts and crafts. Her reference to art was counted as content knowledge, as her peer lesson was built upon her existing knowledge of art gained from life experience. Referring to her peer lesson, she said, "I love arts and crafts. I wanted to do a lesson where I could use my art skills. So, I taught it like it was taught to me. I knew everyone would enjoy it."

Elaine's peer lesson was influenced by her knowledge of music gained from taking clarinet lessons for several years. Her experience as a music student away from classroom settings influenced her knowledge of musical scales and notes. Because she was confident in her knowledge of music, she taught the class the names of the lines of a staff during her peer lessons. She noted:

It was something I knew. I have taken music lessons for years and just decided to teach it. Planning a lesson is easier when you know something about what you are teaching.

Concept map references to content knowledge for both groups consisted primarily of statements similar to Vickie's. She spoke of teachers who, as she put it, "didn't know their subject." Melanie commented how former teachers were "apathetical about their topics." Other references to content knowledge were mentioned by Melanie and Gayle, who both said that they did not want to teach math because they lacked confidence in their knowledge of the subject.

Summary of Content Knowledge

The findings of this study show that traditional and nontraditional elementary preservice teachers' planning and teaching were most notably influenced by subcategories of personal features and not by content knowledge (see Table 5). Both groups' peer lessons were informed by personal beliefs and values about learning and learners. Ernest (1989) notes that beliefs influence instructional behavior more than knowledge of subject matter (Ernest, 1989). Therefore, given both groups' initial emphasis on affective rather than cognitive teaching behavior, and the influence of their beliefs about students (see Table 4), the low percentage of references to this category may not be unexpected.

Categories and Themes

As noted in chapter three, the researcher generated themes from each category of prior experience to more fully explore and explain differences and similarities within and

between the categories. Four themes were inductively generated (Corbin & Strauss, 1990; Strauss, 1987) from the data as the researcher explored and interpreted the meaning of participants' statements. One theme was generated from schooling experiences, personal features, and life experiences categories. By exploring participant statements from the three categories, the researcher generated the terms initial, individual, and independent schemata to describe how schooling experiences, personal features, and life experiences influenced peer lessons and concept maps of teaching.

Theme One: Initial Schemata

Schooling experiences, primarily former K-12 classroom teachers, influenced prospective teachers' initial schemata of teaching. Memories of experiences with former teachers created images of ways to teach that influenced both groups' peer lessons and concept maps. Accordingly, the theme generated from participants' statements in category number one (see Table 4) is "initial schemata." The findings of the study suggest that prospective teachers' "initial schemata" were developed in classroom settings as students. Watching teachers instruct and interact with students imprinted images of how teachers act that appeared to be deeply embedded in both memory and in teaching schemata.

Memories of former teachers provided some participants with teaching strategies and instructional behavior to

emulate during peer lessons. Emulating former teachers is not necessarily inappropriate during peer lessons. However, when the only reason prospective teachers gave for selecting a teaching strategy was, as some put it, "because that's how my teachers did it" (Mary), or "I don't know, that's just the way I saw it done when I was in school" (Veona), their thinking about teaching was interpreted as representing knowledge that might be found in a students' first or initial schemata of teaching. Other statements like "everybody does that when they teach" (Martha), or "it's just common sense" (Careen) illuminate how prospective teachers' initial schemata contain knowledge of teaching that is unchallenged and results from common experiences watching teachers in classroom settings.

Like children playing school who emulate teachers' voices and actions without an understanding of the purposes or consequences of that behavior, some participants' peer lessons were mirrored images of former teachers. Their rationale for emulating former teachers was grounded in what Buchmann (1987) termed as common sense knowledge about teaching that is typically adopted without question or critical analysis (Britzman, 1991).

Theme Two: Individualized Schemata

Personal features in category two (see Table 5) illuminated how knowledge of teaching grounded within participants' schemata of teaching can also be

individualized to reflect participants' personal needs and learning styles, and their individual beliefs and values gained from life experience. As students became more aware of how their schooling experiences were affecting them personally, their rationale for selecting a teaching strategy resulted from (1) meeting individual needs as a teacher, (2) tailoring instruction using personal learning styles as a model for good teaching, or (3) experience-based personal beliefs about teaching. When the knowledge that informed participants' teaching strategies resulted from generalizing their personal experiences and reaction to those experiences as normative, participants' schemata were interpreted as personalized or "individualized."

Individualized schemata were evident when participants used their individual experiences and beliefs as primary rationales for selecting a teaching strategy. Statements like "I taught that way because that is how I learned" (Vickie), or "I watched another student teach that way and I liked it (Todd)," illuminated how participants' knowledge of teaching could be grounded in their reactions to personal experience, by assuming that all students think and feel as they do. Other studies report similar findings (Knowles & Holt-Reynolds, 1991; Holt-Reynolds, 1992).

Moreover, some participants' personal needs formed knowledge about teaching that influenced their peer lessons and concept maps. Personal beliefs and values were primary

influences on both groups teaching schemata. When personal needs, beliefs, values, and learning style primarily influenced peer lessons and concept maps, their schemata were interpreted as representing individualized schemata of teaching. For example, Sally noted:

Children will make me feel good about myself. I looked at my teacher in awe, like they knew everything.

Students will look that way at me and I won't have to prove my worth to be accepted by them.

Sally's comments illuminated how personal needs to feel accepted by others can influence her teaching schemata. Moreover, Ron's desire to teach students his religious beliefs in order to "save children from the evils of the world" while Gayle would not elaborate on a student comment she felt was "too religious" provided evidence that teaching schemata can be individualized according to life experience, individual beliefs, and personal needs.

Theme Three: Independent Schemata

Category three (see Table 5) contained life experiences that increased participants' understanding of others' personal needs, learning styles, beliefs and values. As a result, some participants with extensive life experience developed knowledge of teaching within their schemata that were not primarily influenced by memories of former teachers (i.e., initial schemata), or by personal features (i.e., individual schemata).

Rather, the researcher interpreted their schemata as independent of personal features and schooling experiences. While personal needs and values were important influences on independent schemata, participants were able to make instructional decisions independent of their own needs and act in the interest of others' needs.

Participants with more extensive experience with children or who had spent time employed in classroom contexts recognized that children had needs that differed from their own and that classroom contexts also had needs. When participants' understanding of the needs of others and of school contexts were mediated with their own beliefs, values, learning styles and personal needs during peer lessons or concept mapping, these persons were thought to demonstrate knowledge of teaching that was influenced by independent schemata of teaching.

Statements that illuminated how teaching schemata can be independent of self included "I like entertaining teachers; however, I know that teachers aren't supposed to be entertainers. Children need teachers who entertain a little, but who also make lessons meaningful and interesting" (Beth). Kelli said, "Kids learn in different ways. I have to remember that they don't all see things the way I do and learn the way I was taught." During his stimulated recall interview, Jerry said "I have a passion for teaching, but I know not every kid has a passion for

learning. I need to make the lesson relevant to each students' life if they are to be motivated enough to learn." Carol said that "there are all kinds of kids in school, givers and takers, those who contribute to the classroom in important ways and those who just show up." The researcher interpreted these statements as evidence of more independent schemata that are informed by prospective teachers' knowledge of differences between themselves and their students and not by personal features (see Table 5).

Summary of Themes

Participant statements from each category of prior experience were analyzed by the researcher and themes were generated that conceptualized how schemata were influenced by subcategories within each category. Initial, individual, and independent schemata represent the four themes generated from the data.

Participants' statements provided evidence to suggest that their knowledge of teaching was influenced by initial, individual and independent schemata. In other words participants' peer lessons and concept maps of teaching were influenced by all four categories of prior experience, and therefore, by initial, individual, and independent schemata. Clearly, these themes illuminated how developing a cognitive framework for teaching is complex and begins long before prospective teachers enter teacher education.

Summary of the Findings

This chapter reported the influence of schooling experiences, personal features, life experiences, and content knowledge on teaching schemata of traditional and nontraditional elementary preservice teachers. Student responses from stimulated recall and concept map interviews were used to generate themes from the data that illuminated how prior experience within each category influenced prospective teachers' schemata. The themes also made salient the complexity of the teaching knowledge held within prospective teachers' schemata of teaching, and how that knowledge informs classroom instruction.

Lastly, the findings of this study provided evidence that beginning elementary preservice teachers' prior experience-based knowledge of teaching plays a crucial role in the interpretation of and subsequent responses to instructional events. These findings have been supported in other studies (Buchmann, 1987; Bullough & Knowles, 1991; Goodman, 1988; Lortie, 1975; Nespor, 1987; Pajares, 1992; Weinstein, 1988)

CHAPTER 5

WORKING HYPOTHESIS AND IMPLICATIONS

Five working hypothesis were generated from the findings of this study (Lincoln & Guba, 1985). These hypotheses are transferable to similar research contexts and samples of participants, and are useful for discussing the influence of prior experiences on teaching schemata of traditional and nontraditional elementary preservice teachers.

Hypothesis One

Elementary preservice teachers' views of what to teach are influenced collectively by their values and beliefs gained from life experience.

Participant statements clearly indicated that both groups entered teacher education with well-developed personal beliefs and values that were influenced by church, work, schooling, and family experiences. Personal beliefs and values influenced both groups' peer lessons and concept maps of teaching. Participants often expressed a desire to teach their personal beliefs and values in order that students might adopt them as guides for behaving and for making choices about "right and wrong."

Further evidence to support this hypothesis was inferred by the researcher from the infrequency of references to content knowledge during concept map

interviews. Traditional and nontraditional preservice teachers overwhelmingly included terms on their concept maps that reflected their personal values more than their knowledge of subject matter. Participants initially viewed the classroom as an arena for establishing personal values and belief systems that would guide children, as one respondent said, "away from the evils of the world."

Hypothesis Two

Beginning elementary preservice teachers' knowledge of teaching is inferred from life experience, and therefore is often an incomplete and unreliable guide to the nature and reality of teaching.

The knowledge that prospective teachers interpret from life experience is inferred, and this inference must take into account participants' total belief system, the contexts in which experience is gained, and prospective teachers' own personality and behavioral dispositions. Accordingly, knowledge inferred from various life experience can be misinterpreted and lead participants to make incorrect assumptions about teaching. Debra, for example, inferred from some "extremely negative and overwhelmingly depressing" experiences with students while substitute teaching that "the cards are stacked against teachers." From these experiences Debra concluded that she has little chance of being a successful teacher, and that she does not want to

feel responsible for every students' learning, given the way some students' behave in class.

Hypothesis Three

Schemata gained from experiences in family, prior work, and nonclassroom teaching contexts are useful in instructional settings.

Psychologists have long debated the extent to which people transfer knowledge from context to context (Smagorinsky & Smith, 1992). Peer lessons and concept map interviews implicitly conveyed prospective teachers' general knowledge from various life experience to an instructional context. Participants' peer lessons and discussions of teaching from concept maps further illuminated how knowledge of learning and learners can be gained in one context and useful to direct thinking and behavior in another.

Hypothesis Four

Early field experiences may help prospective teachers develop more realistic views of classroom instruction.

Preservice teachers' initial schemata of teaching were highly affective, defining good teaching as the ability to "care" or "love" children. Because they overemphasize interpersonal skills and underemphasize instructional skills, participants would benefit from extensive field experiences early in teacher education. Getting them into elementary classrooms for extended observations, interactions, discussions, and explorations may help

prospective teachers view teaching in more realistic ways. Time spent in classrooms working beside experienced elementary teachers would expand prospective teachers' understanding of the interpersonal and instructional qualities needed to be an effective elementary school teacher. Other studies support this hypothesis (Goodlad, 1990; Howey, 1983; Zeichner, 1986).

Hypothesis Five

Educational beliefs are linked to beginning teachers' total belief and value systems, such as philosophy or religion. Understanding the connectedness of prospective teachers' whole belief and value systems may provide a clearer picture of how prior experiences have been interpreted and integrated into existing schemata.

Educational beliefs were a primary influence on participants' peer lessons and concept maps of teaching. Both groups' beliefs about learning and learners were not independent subsystems of some greater central-belief structure. Instead, their beliefs/values of learning and learners were inextricably intertwined with other beliefs and values stemming from religion and philosophy. Ron and Brandie exemplified how participants' religious values and beliefs were not independent of their beliefs about students and classroom teaching. Prospective teachers held strong values about learning and learners that influenced both

their attitude toward students and their instructional behavior. Teacher education needs a clearer understanding of how prior experience-based values, beliefs, attitudes, and dispositions mediate preservice teachers' overall conceptions of learning and learners.

Implications for Teacher Education

Seven implications for teacher education are presented in this chapter. All implications reported in this study were derived from the researcher's interpretations and judgments about the data (Wolcott, 1990). Furthermore, these implications provide teacher educators with possible alternatives to current practice that may help prospective teachers build upon their initial knowledge of teaching that is gained from life experience.

1. Help prospective teachers recognize their views of teaching and the strengths and limitations of those views.

During concept map interviews, participants frequently described former teachers' classroom behavior which they want to emulate when they become teachers. The researcher asked participants how they knew that these behaviors would promote effective teaching and increased student learning. Participants' answers were interpreted by the researcher as shallow, lacking understanding of teaching and learning. Responses like "I don't know, it's just common sense," or "it just does" or "it helped me to learn" illuminated how

prospective teachers need help recognizing their emerging understanding of teaching and learning.

Most prospective teachers in this study could not offer rationales for their own attitudes and beliefs about teaching. Not until prospective teachers see their views of teaching in contrast to the realities of teaching or in comparison with research-based knowledge of teaching can they begin to recognize the strengths and limitations of those views. The findings of this study agree with Holt-Reynold's (1992) claim that preservice teachers' must recognize how their personal theories of teaching color what they notice in classrooms and the sense they make of it before they can be asked to return to schoolrooms and "somehow "see" something new" (p. 347).

This notion assumes that prospective teachers will enter classrooms during teacher education where they will see something new and different, with regard to classroom and teaching practices. Classroom and instructional practices have changed little over the years (Buchmann, 1987; Bullough et al., 1992). As long as classrooms and teaching practices remain unchanged there may be little for prospective teachers to "see" that does not confirm what they already know.

2. Prospective teachers' views of teaching that perpetuate outdated beliefs about learning, and promote

less-effective teaching practices, should be challenged during teacher education.

The findings of this study suggest that prospective teachers teach in ways they were taught. Traditional and conventional methods of teaching were modeled by both groups during peer lessons (i.e, teacher-telling and student-listening activities [Holt-Reynolds, 1992; McDiarmid & Price, 1990])). Moreover, some nontraditional students presented lessons that had been taught to them as many as forty years earlier, using methods and materials that current research has suggested are outdated or less effective (e.g., overemphasis on phonics instruction, use of reading and language skills worksheets [Reutzel, R., & Cooter, R., 1992])). Unless presented with more effective models of instruction during teacher education coursework and field work, prospective teachers may only perpetuate ineffective teaching styles in the face of better knowledge about teaching.

3. Nontraditional students whose knowledge of teaching is influenced more often by independent schemata may require different teacher education experiences than younger students whose knowledge of teaching is primarily influenced by initial or individualized schemata.

Both groups' peer lessons and concept maps of teaching were influenced by similar kinds of prior experience.

However, nontraditional students' extensive life experience helped them develop views of teaching that more often reflected independent schemata. This groups' interactions with children, prior work experiences, and nonclassroom teaching opportunities developed schemata that allowed them to see more clearly the complexities of instructing and interacting with children and adults in classroom contexts. In an earlier study, Powell (1992) noted:

Because of these different levels of student awareness, and because they varied in their development of beliefs and values of teaching, different teacher education activities may be needed for traditional and nontraditional preservice teachers as they are prepared for the classroom (p. 236).

The findings of this study support Powell's (1992) assertion, and further argue that understanding differences in students' life experience and levels of understanding about learning and learners are important to teacher education. Preservice programs may fall short of expectations if they do not account for the influence of students' age, maturity, and prior experience on their teaching schemata.

4. Because prospective teachers' initial knowledge of teaching influences how they conceptualize instructional tasks and behavior, their knowledge should be acknowledged and built upon during teacher education.

Prior experiences influenced both groups' knowledge acquisition, interpretation of life experience, task definition of peer lessons, interpretation of terms used on concept maps, use of content knowledge, interactions with students and instructional strategies during peer lessons. All of this occurred without any instruction about teaching from the course instructor. Both groups enrolled in the introductory course having already obtained a teacher education from prior experiences that was sufficient for them to define, plan and teach peer lessons. The findings of this study support McDiarmid and Price's (1990) claim that the knowledge prospective teachers bring to teacher education should become the curriculum that guides teacher education programs. Teacher educators' own specialized knowledge of theory and practice, coupled with prospective teacher' prior experience-based knowledge of teaching, should become the foundation for building preservice teachers' knowledge during teacher preparation.

5. Introductory teacher education coursework should be completed partly in elementary classroom settings where prospective teachers can explore their beliefs about teaching and students and contrast them with beliefs held by experienced classroom teachers.

Traditional and nontraditional students entered teacher education with personal theories of teaching that were untested in classroom settings. While peer lessons provided

participants with an opportunity to instruct, teaching peer lessons to university students did not allow participants to explore the effectiveness of their theories of teaching with children in elementary classroom settings. Introductory courses should be conducted in elementary schools where participants' theories of teaching could be illuminated and then tested for their impact on student achievement. Over one semester there is little time for prospective teachers to explore their theories of learning. Prolonged exposure to classroom settings, under the guidance of the introductory course instructor and a cooperating classroom teacher might give beginning teacher education students time to evaluate the effectiveness of their teaching methods on student achievement over time.

6. Beginning preservice teachers must be given opportunities and strategies to reflect upon their prior experience-based knowledge of teaching by constructing and studying their personal histories and the personal histories of their peers.

Participants in this study entered teacher education with life experiences that, in effect, tell the story of their becoming a teacher. Sally and Jenny wept as they told stories of former teachers who had influenced their lives as children. Their stories, although isolated events, were validated by the experiences of others in the study. Stories of students who were never praised or who were

highly praised by teachers, and stories of teachers who didn't care about students or who loved students to death are valuable topics of discussions about teaching during teacher education. By developing and sharing their own stories, participants can understand how prior experiences have shaped their own and others' conceptions of teaching.

7. Exploring prospective teachers' schemata of teaching in elementary classrooms may yield more fruitful data about the influence of K-12 schooling experiences on teaching schemata.

Prospective teachers' initial teaching schemata were influenced by experiences in elementary classrooms. Since their initial knowledge of teaching was developed in classroom settings, exploring preservice teachers' schemata in any other setting such as a university classroom may illuminate only limited aspects of preservice teachers' knowledge of teaching.

The schemata that influenced peer lessons with college students who were pretending to be children may not be appropriate experiences for informing participants' teaching with real children in actual classroom settings.

Furthermore, preparing and planning to teach adults in a university setting prompted at least three participants in this study to plan and teach differently than they might have were the lessons taught in actual elementary classrooms. Exploring schemata in actual classroom settings

with young children may illuminate features of participants' teaching schemata that are inaccessible during peer lessons with adults (e.g., classroom management schemata; ability to respond to student questions).

Implications for Future Studies

Longitudinal Studies of Nontraditional Students

Longitudinal studies are needed that explore how differences in life experience influence prospective teachers' ability to create different classroom experiences for students. Teacher educators' can explore what prior experiences or personal features promote effective instruction. This knowledge may help teacher educators provide traditional students with experiences that increase their knowledge of learning and learners.

Another area for longitudinal research is the influence of parenting and prior work on teacher development. Prospective teachers believed that good parenting skills were synonymous with good teaching skills, and that their former careers had prepared them to teach. How parenting and prior work experiences influence prospective teachers' acceptance of teacher education knowledge warrants further investigation. Also, how will nontraditional preservice teachers with more extensive parenting and prior work experience assimilate school culture, given the complexities and uniqueness of teaching in elementary school settings? Since this group will use knowledge attained apart from

school settings to inform their teaching, future studies should explore what changes in their conceptions of teaching will be needed in order for this group to become effective classroom teachers.

Prior Experiences and Studies of Teacher Socialization

Studies are needed that explore how prior experiences shape traditional and nontraditional preservice teachers' teaching perspectives over time. The findings of this study clearly point out that life experiences influence prospective teachers' socialization into teaching. The extent of the influence of prior experience on teacher socialization is not fully understood (Bullough et al, 1992; Zeichner, 1986).

Studies about Content Knowledge

Studies are needed that illuminate how prospective teachers' attitudes toward content knowledge influences their professional development. Thus far, studies have reported preservice teachers' entering conceptions of subject knowledge (Ball & McDiarmid, 1987; Zeichner & Gore, 1990). Missing are longitudinal studies that document the influence of attitudes toward content knowledge on teacher behavior and student achievement (Zeichner & Gore, 1990). How do attitudes about content knowledge influence prospective teachers' classroom teaching? How are teachers' attitudes toward content knowledge transmitted to students? Because beginning preservice teachers in this study

underemphasized content knowledge during construction and discussion of their concept maps of teaching, these questions warrant further attention.

Extending the Focus of this Study

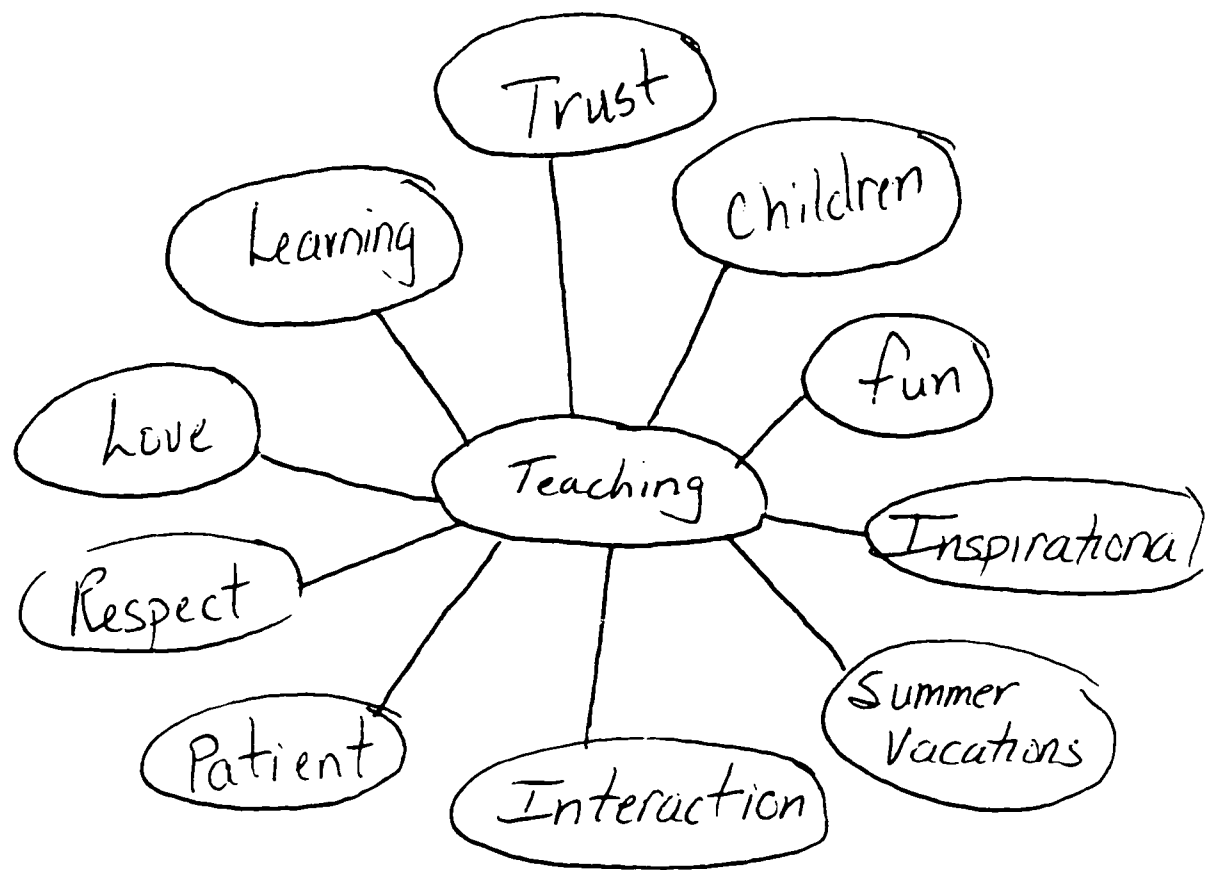
The influence of race, class, gender, and social contexts on teaching schemata were beyond the scope of this study. However, these factors may influence teaching schemata and should be explored. How schooling experiences, personal features, life experiences, and content knowledge are mediated by race, gender, culture, and social class remains unclear (Britzman, 1991; Zeichner & Gore, 1990).

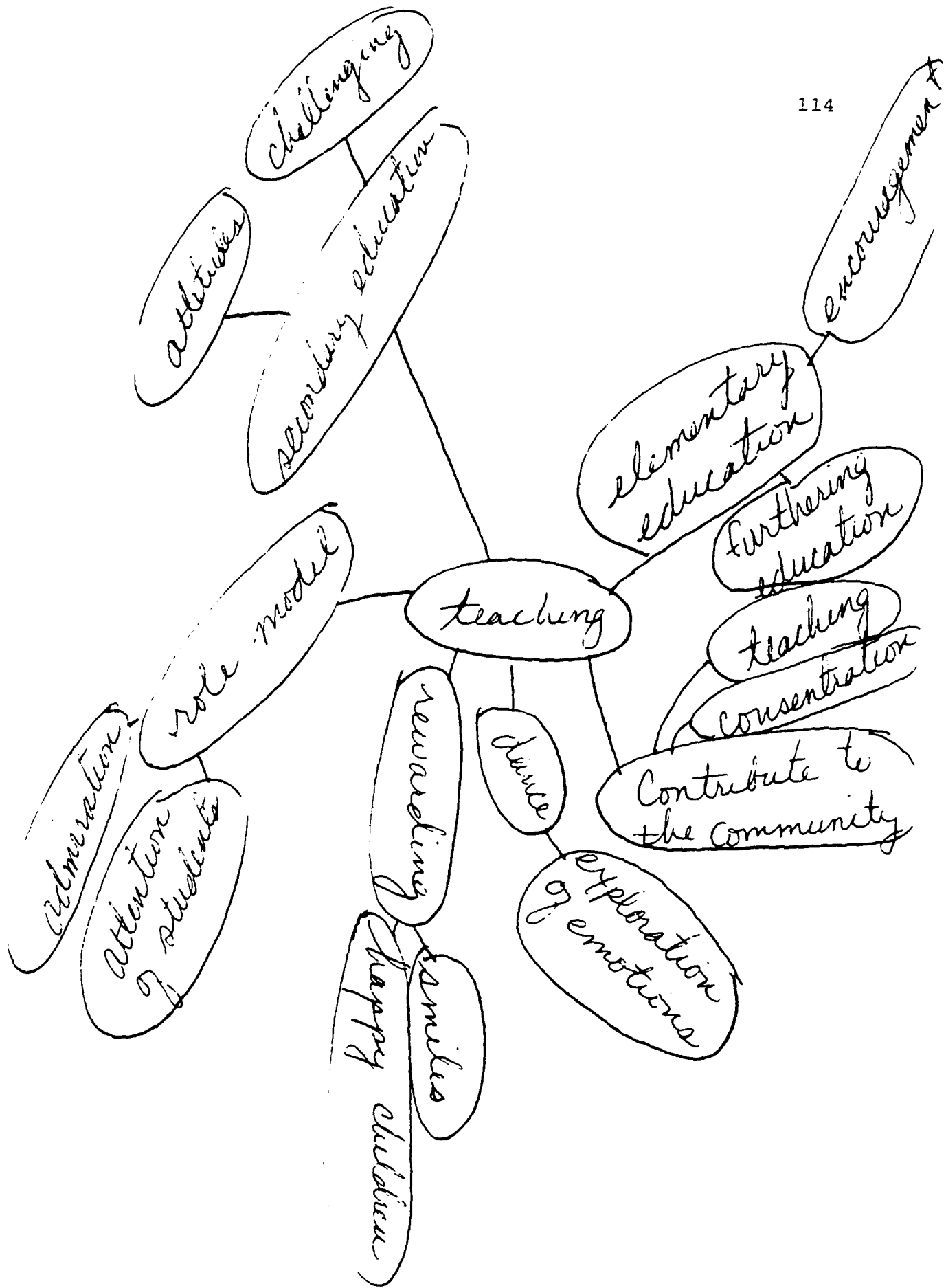
Conclusion

Most traditional preservice teachers in this study were entering teaching as a first profession. They were trying to develop their identities as professionals. Nontraditional students in this study had well-developed identities as workers and mothers. Yet, preservice teachers in this group were using their role identity as parents and workers to define who they would be as teachers (e.g., becoming a mother to students). The desire of both groups to merge a personal with a professional identity suggests the strength of imagining oneself as a teacher (Bullough, 1989, 1990). This is particularly salient in the number of participants who said that they had always planned on becoming a teacher. For them, becoming a teacher defined what it meant to grow up and become an adult.

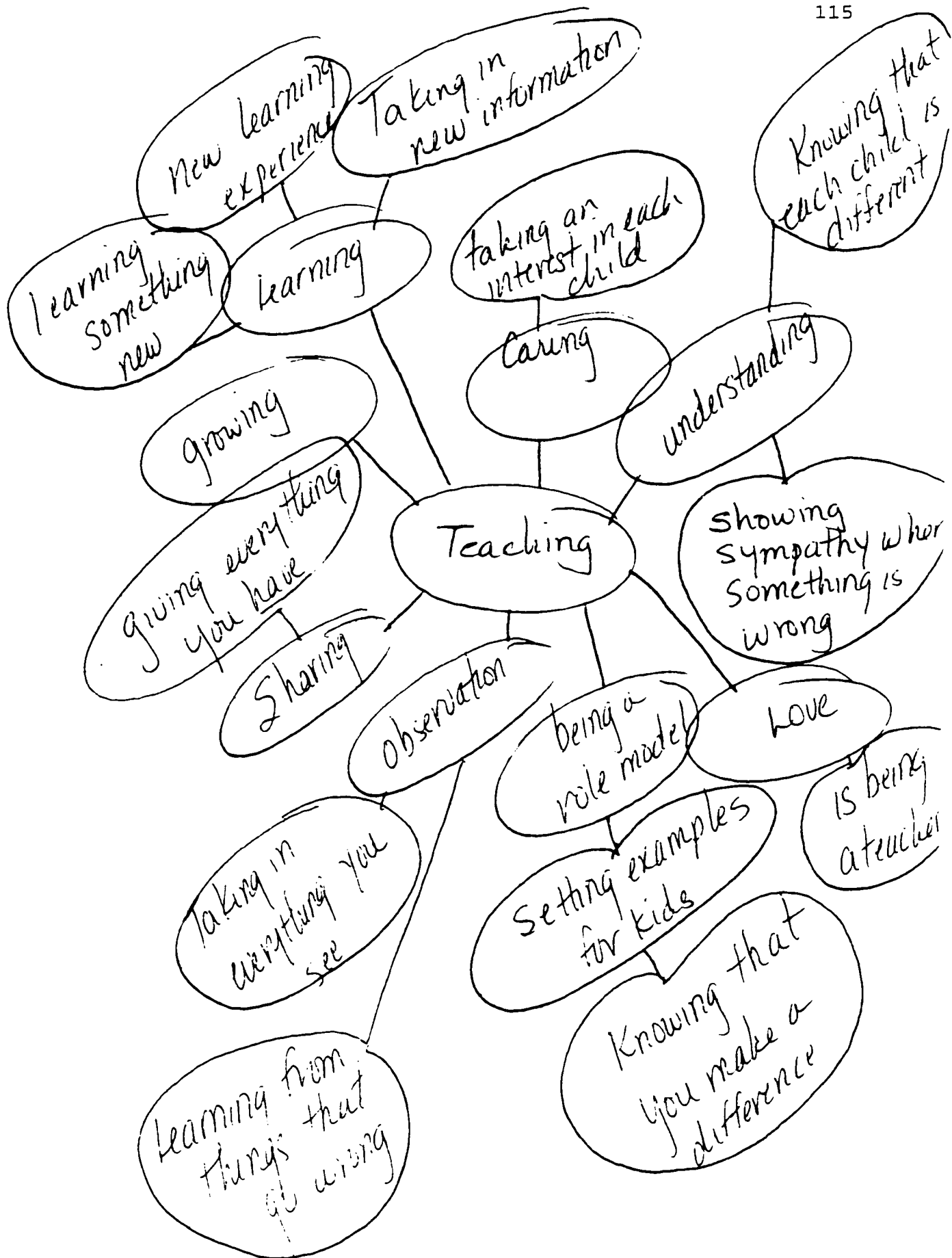
Prospective teachers hold firmly to images of former teachers that have influenced their schemata of teaching. After all, these former teachers are those that both groups most want to emulate. However, it is not their effective teaching strategies that prospective teachers initially desire to duplicate, but their former teachers' interpersonal skills and ability to nurture and love children in both word and deed.

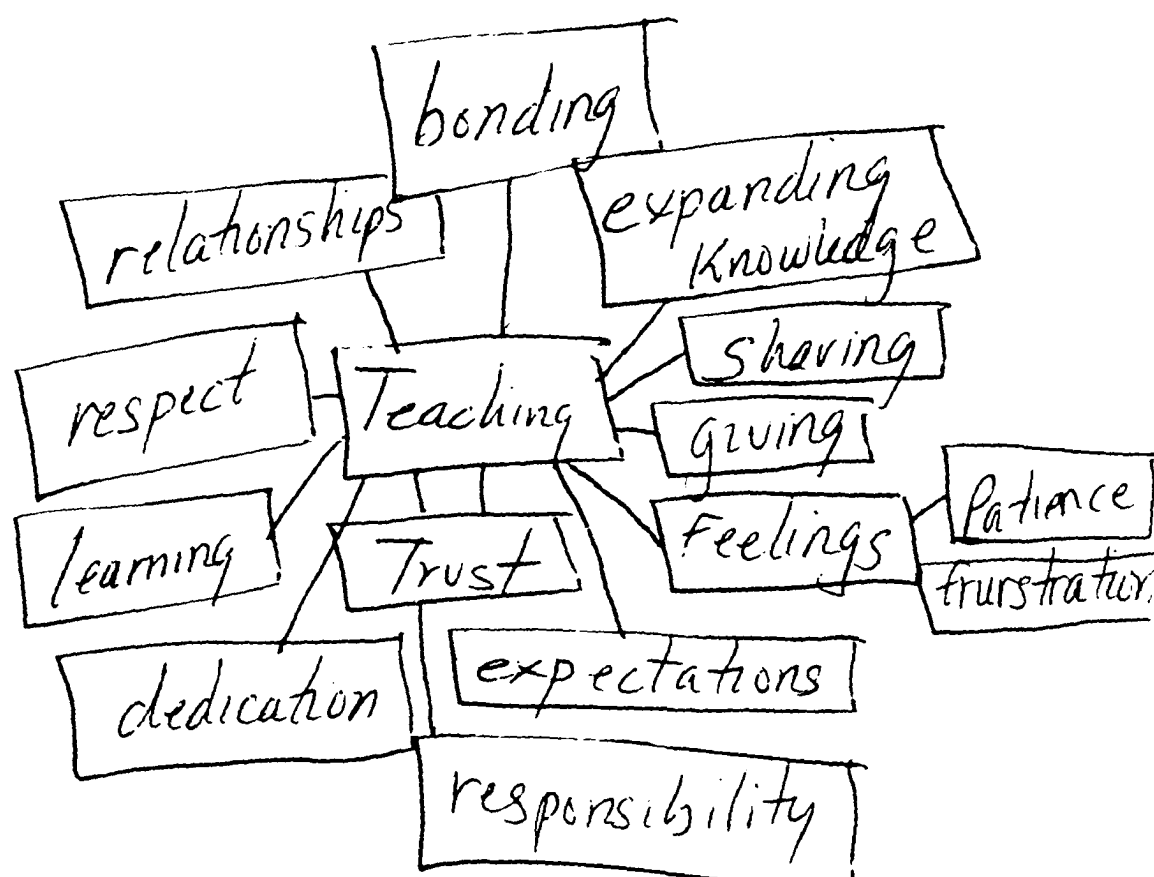
APPENDIX I
CONCEPT MAPS

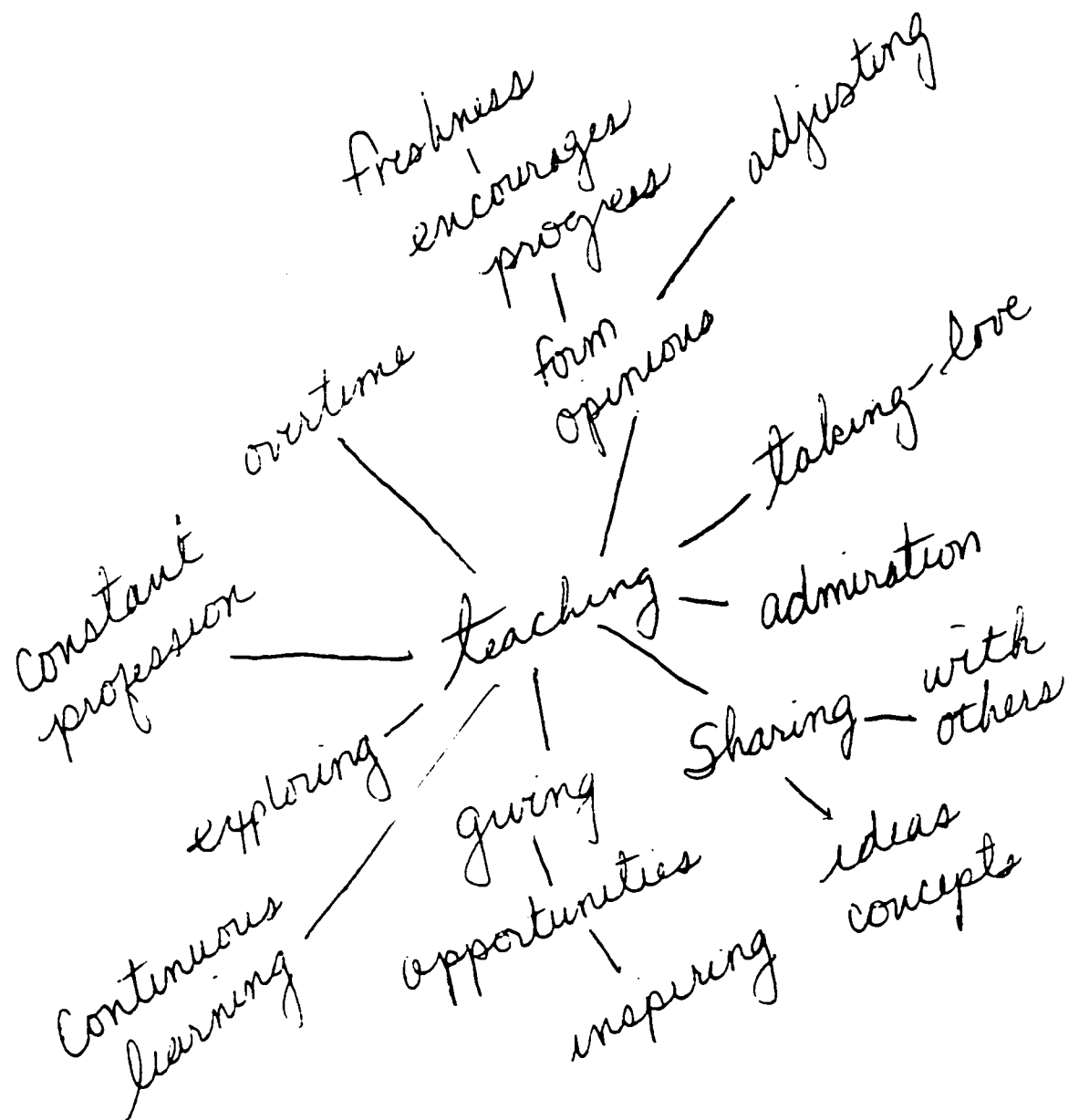


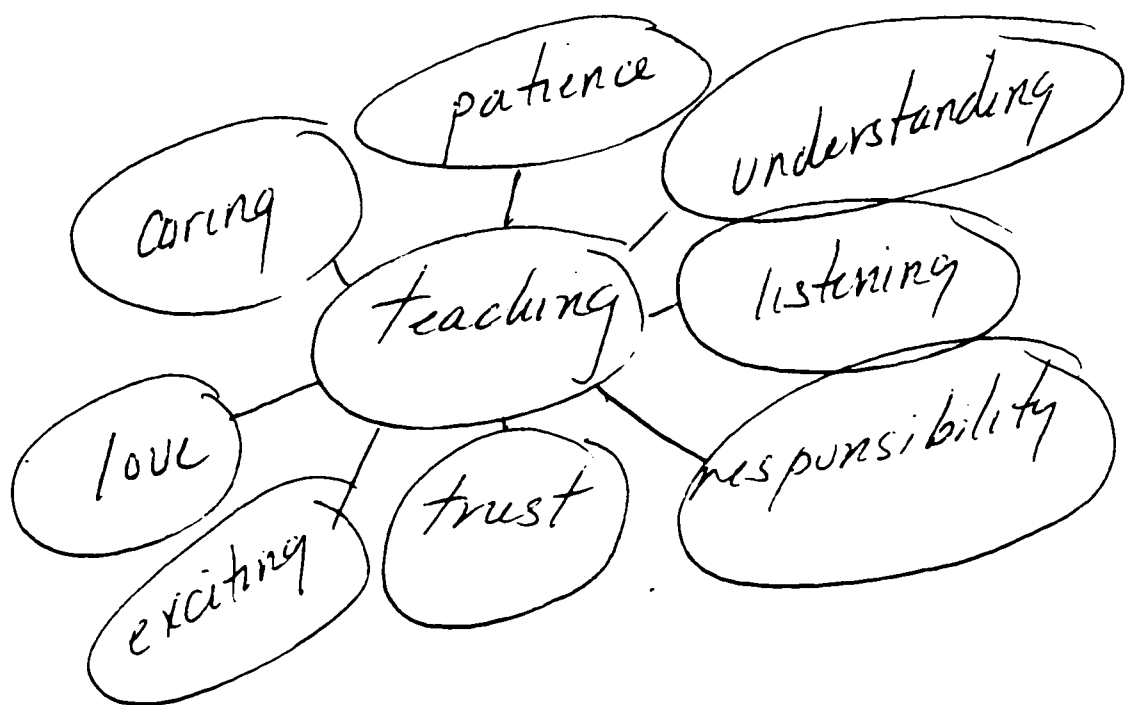


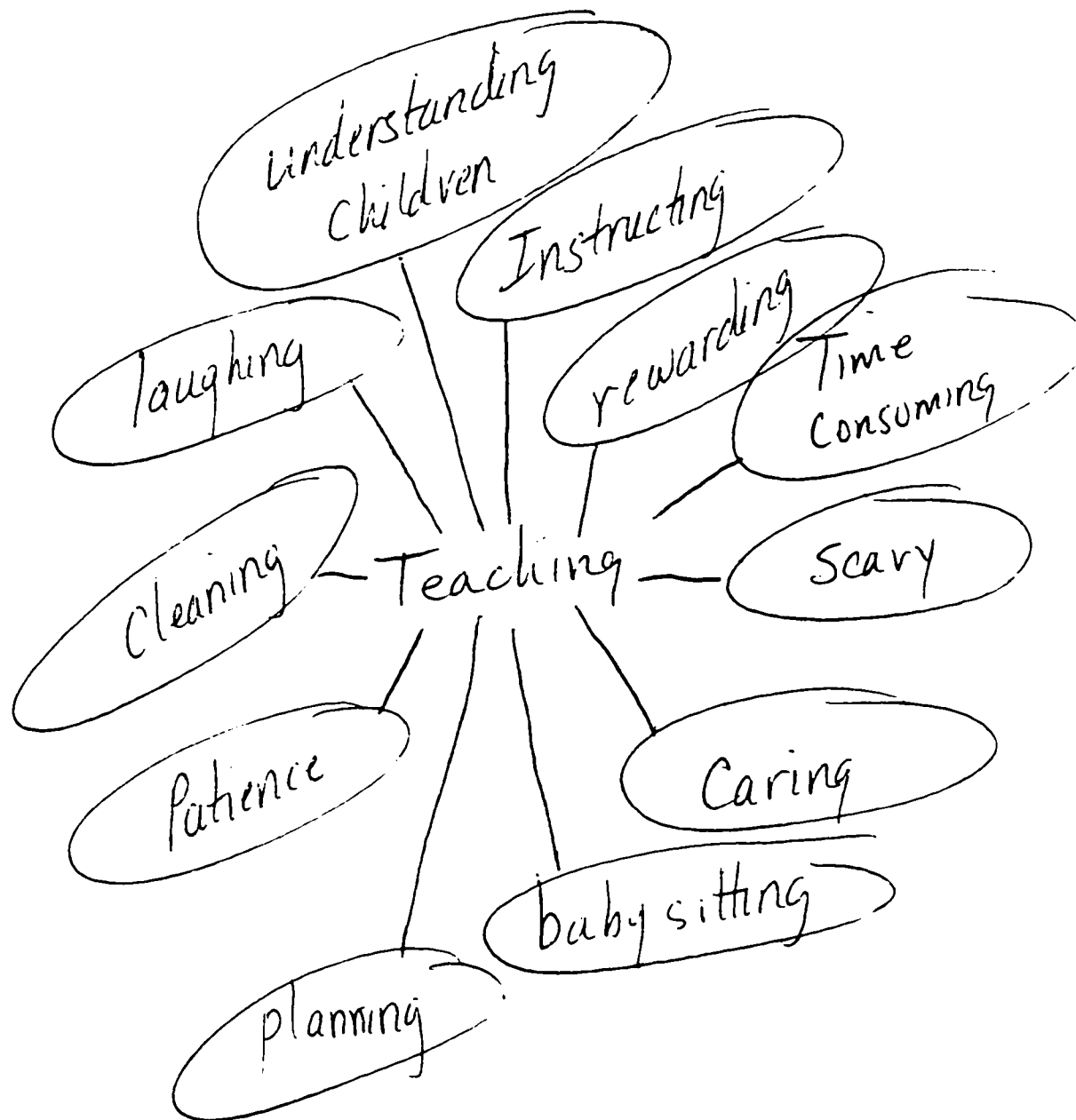
Mary's concept map of teaching.

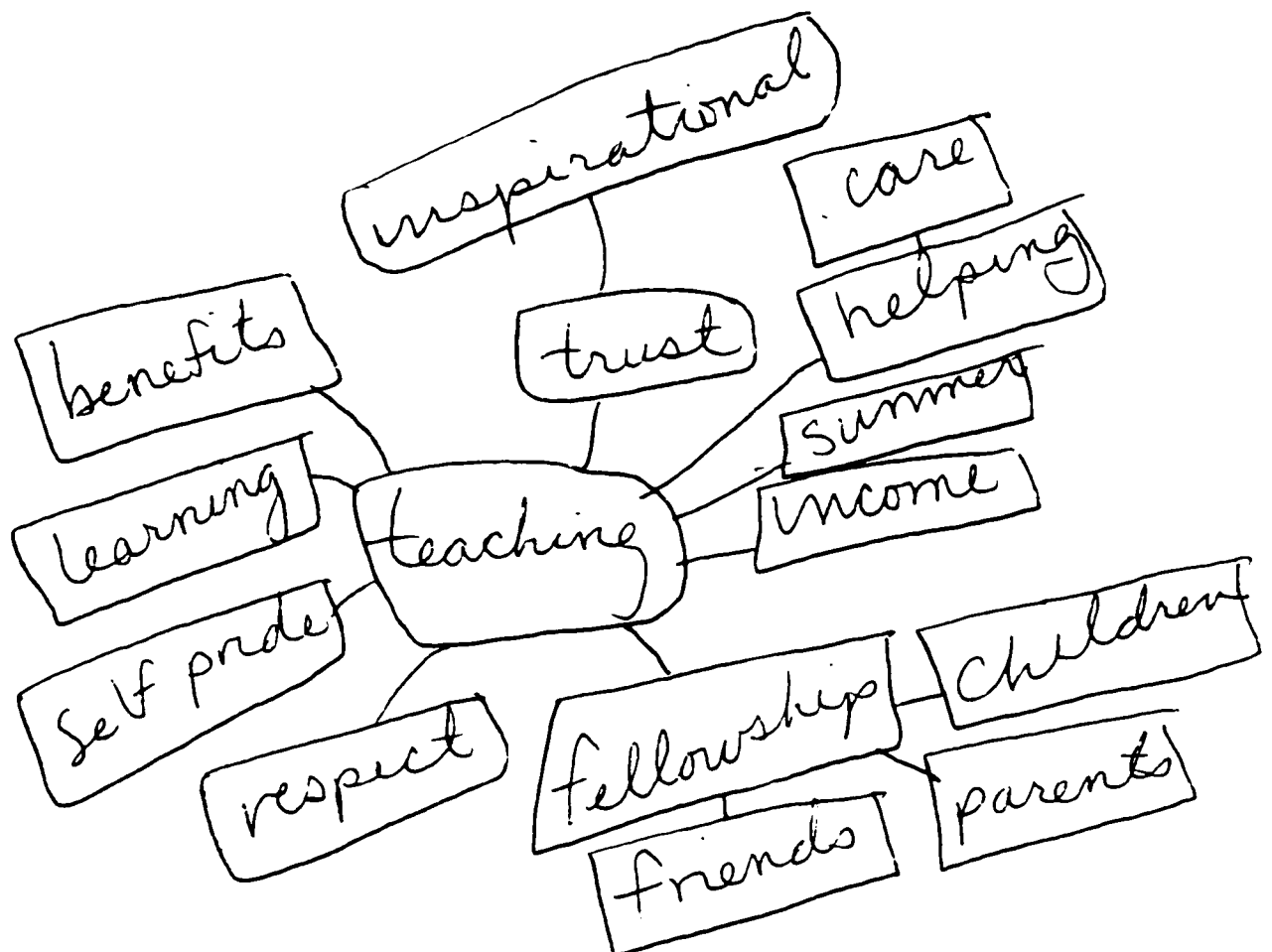












APPENDIX II
CONSENT FORMS

THE INFLUENCE OF PRIOR EXPERIENCES ON TEACHING SCHEMATA OF TRADITIONAL AND NONTRADITIONAL ELEMENTARY PRESERVICE TEACHERS

Purpose

The purpose of this study is to explore how life experiences, prior to entering teacher education have influenced your thinking about planning and teaching. This information will help me recognize your initial beliefs about instruction and how those beliefs originated.

Subjects

I am examining preservice teachers' initial concepts of planning and teaching prior to university methods coursework. Since you are a CIE 201, Introduction to Elementary School Teaching student, you have been selected for this study. A total of 60 UNLV, CIE 201 students will be invited to participate in this study.

Procedures

If you agree to participate in this study, your recorded comments about your peer-lesson, concept map of teaching, and from your autobiographical survey will be used as data in this study. Your real name will not be used so that there will be no way for anyone else to identify you in this study. I will use the information I learn from you in my dissertation. Your comments will be combined with other

students' responses to generate data in this study. I will look for patterns and trends in the kinds of prior experiences that influenced your thinking about teaching. If you request a copy of your transcript I will provide you with one.

Treatments and Risks

There are not treatments, experiments or risks. Nothing in this study will harm you in any way. You will be asked to explain your thinking during the planning and presentation of your peer lesson and the construction of your concept map of teaching. You will be asked to provide experiences that influenced your peer lesson and overall knowledge of teaching as defined by the terms included on your concept map of teaching. Furthermore, you will be asked to discuss some information you listed on your autobiographical survey.

PARTICIPATION AND NONPARTICIPATION IN THIS STUDY WILL NOT EFFECT YOUR GRADE FOR THIS CLASS IN ANY WAY.

You will be given a signed and dated copy of this form.

Your signature below indicates that you have decided to volunteer for this study, as a research subject, and that you have read the above information.

Date	Signature of Participant	Signature of Researcher
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ASSOCIATE VICE PRESIDENT FOR RESEARCH

UNIVERSITY OF NEVADA, LAS VEGAS
4505 MARYLAND PARKWAY • LAS VEGAS, NEVADA 89154-1002 • (702) 597-4240 • FAX (702) 597-4242

TO: James R. Birrell, ICS

FROM: Dr. William E. Schulze, Director, Research Administration

DATE: August 20, 1992

RE: Exempt status of human subject protocol entitled:
The influence of biography on teaching schemata of beginning traditional and nontraditional elementary preservice teachers.

The protocol for the project referenced above has been reviewed by the Office of Research Administration, and it has been determined that it meets the criteria for exemption from full review by the UNLV human subjects committee. Except for any required conditions or modifications noted below, this protocol is approved for a period of one year from the date of this notification, and work on the project may proceed.

Should the use of human subjects described in this protocol continue beyond one year from the date of this notification, it will be necessary to request an extension.

If you have any questions or require any assistance, please give us a call.

Required conditions/modifications:

None

APPENDIX III
AUTOBIOGRAPHICAL SURVEYS

Preservice Teacher Survey

Name: _____ Birthdate: _____

Home Address: _____

Phone: _____ Teaching Field(s): _____

A. Academic Status (circle)

1. Undergraduate student, seeking degree and license
2. Graduate student (bachelors level) seeking license only
3. Graduate student (bachelors level) seeking license and masters degree
4. Graduate student (masters level) seeking license only
5. Other (please explain)

B. Employment Status (circle)

1. Teaching will be my first full time profession/job.
2. Teaching will be my second profession/job. By entering teaching I am changing careers.

NOTE: If you circled number two, please explain.

C. List all your prior and present work positions (dates are not necessary)**D. If you are a parent, list ages of children:** _____**E. If you have any relatives that are teachers, school administrators or college instructors, please explain:****F. List any and all activities (including prior work) where you were in the role of an instructor, trainer, counselor or teacher.****H. List all prior education courses:**

APPENDIX IV
DEFINITIONS OF TERMS

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DEFINITIONS OF TERMS

Teaching Schemata: The knowledge prospective teachers used to prepare and present their peer lessons and to construct concept maps of teaching.

Traditional Preservice Teacher: A prospective teacher who entered WSU's teacher education program after graduating from high school.

Nontraditional Preservice Teacher: A prospective teacher who entered WSU's teacher education program from another career or after spending time at home raising children.

Initial Schemata: A cognitive framework for teaching that causes prospective teachers to emulate former teachers' instructional routines without an understanding of the reasons for or consequences of the routines.

Individualized Teaching Schemata: The selection of teaching routines based upon personal reactions to former classroom teachers' instructional behavior.

Independent Teaching Schemata: A cognitive framework for preparing lessons based upon an understanding of others' needs in classroom contexts.

Integrated Teaching Schemata: Schemata that were influenced by the integration of participants' general knowledge gained from life experience with their content or subject matter knowledge.

Initial: This term was used to denote the beginning of participants' teacher education program, or the time in which the study was conducted. For example, initial beliefs meant beliefs prospective teachers had at the beginning of the introductory course.

Concept Map: A listing of terms surrounding a concept that define or conceptualize the concept.

Peer Lesson: A five-minute lesson prepared and presented to university classmates. These lessons were videotaped.

Stimulated Recall Interview: A viewing of segments of videotaped peer lessons and a discussion of those segments in order to explore participants' thinking during planning and instruction.

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