



How Do Elementary Education Majors Prior Conceptions About Teaching, Formed During Their Own Experiences as Children in K-12 Classrooms, Impact Their Acceptance of the Pre-Block Teacher Education Curriculum at Montana State University

by JOHN M ANSELM

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

Montana State University

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Abstract:

The purpose of this study was to develop for teacher educators a grounded theory of how elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact their acceptance of the teacher education curriculum at Montana State University.

The research method was a qualitative, grounded theory design. The researcher interviewed 40 pre-service teachers at Montana State University. This group consisted of 20 freshmen level and 20 junior level students who had declared education as their major.

Findings supported prior research and reinforced existing themes in the literature regarding the impact of pre-service teachers' preconceptions on teacher education. Analysis of the data supported the contention that pre-service teachers arrive at Montana State University with well-developed conceptions of teaching and being a teacher. They develop these conceptions early in their lives, while they are in K-12 grade classrooms. These conceptions influence and at times limit what these students are willing to accept from the curriculum at Montana State University.

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UNIVERSITY?

By

John Michael Anselmi

A dissertation submitted in partial fulfillment  
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of

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in

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MONTANA STATE UNIVERSITY-BOZEMAN  
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APPROVAL

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This dissertation has been read by each member of the dissertation committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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Date

November 18, 2002

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## ABSTRACT

The purpose of this study was to develop for teacher educators a grounded theory of how elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact their acceptance of the teacher education curriculum at Montana State University.

The research method was a qualitative, grounded theory design. The researcher interviewed 40 pre-service teachers at Montana State University. This group consisted of 20 freshmen level and 20 junior level students who had declared education as their major.

Findings supported prior research and reinforced existing themes in the literature regarding the impact of pre-service teachers' preconceptions on teacher education. Analysis of the data supported the contention that pre-service teachers arrive at Montana State University with well-developed conceptions of teaching and being a teacher. They develop these conceptions early in their lives, while they are in K-12 grade classrooms. These conceptions influence and at times limit what these students are willing to accept from the curriculum at Montana State University.

## CHAPTER ONE

## INTRODUCTION TO THE STUDY

Statement of the Problem and Background

Tim was upset. As he walked distractedly down the hall to the library in Anderson School, his thoughts spilled from his mouth as soon as they entered his head. "Oh man, what...what am I going to do? That was terrible...I don't know..." he babbled as he entered the library and slumped onto a chair designed for a first grader. Tim had just completed the first lesson of his teaching career; he was unsure if it would be his last. "They just wouldn't listen...I couldn't get them under control. Maybe this isn't for me. It wasn't like this when I went to school." He looked at me and asked, "Is it always like this?" I was unsure of how to respond because I understood what Tim was experiencing. The same thoughts had gone through my head during my first year of teaching.

Tim was no different from other paraprofessional students I was charged to observe. He was inspired to teach when "around eighth grade," people close to him encouraged him to "try teaching because [he] was so good with kids." Tim used the terms "caring, patient, respectful, and fair" when describing an effective teacher, and he was "pretty sure" he knew what it was like to teach. In contrast to his affective ideas of teaching, Tim felt that he could "manipulate" children to behave and that "using a good manner" would make them "want to be good." Tim seemed to feel that his personality, good intentions, and fun activities would be enough to ensure an orderly classroom.

Tim is still training to be a teacher, and he disregards the doubts expressed to me earlier. He has said that he can't wait to get into the classroom so he can "learn how to teach." He seems to have forgotten the complexities of the classroom he witnessed during his first lesson.

Why do students like Tim have such an unrealistic view of teaching? Doesn't their college coursework prepare them for the realities they will face as educators? The students say no. They claim that the only beneficial part of any teacher preparatory program is the practical teaching experience. Education majors see class instruction as irrelevant and often unnecessary. Are they correct, or could their learning be clouded by conceptions about teaching formed during their own experiences as children in K-12 classrooms? We might expect conceptions of teaching developed from the perspective of a younger student to be more simplistic. How might these conceptions affect an education major's acquisition of knowledge? Perhaps the courses are more relevant than students believe but need to address the prior conceptions students hold. Classes would then become an avenue for education majors to develop more appropriate views of teaching. Thus the coursework might help prevent the entry shock some new teachers experience. Armed with a more appropriate theory of how elementary education majors' prior conceptions impact their professional development, teacher educators might better understand their students and ultimately improve instruction.

Studies have shown that many elementary education majors choose their profession at an early age (Kronus, 1969; Wright & Tuska, 1968). They come to college with conceptions that have been influenced by their own personal histories (Calderhead

& Robson, 1991; Furlong & Maynard, 1995) and by their experiences as children in K-12 classrooms – what Lortie (1975) calls the “apprenticeship of observation.” These prior conceptions interfere with education majors’ ability to learn from instruction (Bird, 1993; Calderhead & Robson, 1991; Weinstein 1990). In response to these findings this study was designed to investigate the conceptions students have of learning to teach and how these influence the knowledge they acquire. Research to date has not provided teacher educators with a complete explanation of the effects the “apprenticeship of observation” has on pre-service teacher learning. The results of this study might help teacher educators provide students like Tim with a clearer appreciation of the teaching profession.

### Problem Statement

The problem is that teacher educators need a grounded theory of how elementary education majors’ prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact acceptance of the pre-block teacher education curriculum at Montana State University.

### Purpose of the Study

The purpose of this study is to develop for teacher educators a grounded theory of how elementary education majors’ prior conceptions about teaching, formed during their

own experiences as children in K-12 classrooms, impact acceptance of the pre-block teacher education curriculum at Montana State University.

### Question

Major Question: How do elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact their acceptance of the pre-block teacher education curriculum at Montana State University?

Answers to the following questions will provide further information to answer the transcendent question:

Q1: When do elementary education majors first develop their conceptions of teaching?

Q2: What are education majors' prior conceptions of teaching?

Q3: How accurately do elementary education majors believe their prior conceptions represent the realities of teaching?

Q4: What effect do the prior conceptions of elementary education majors have on the acquisition of knowledge in a teacher preparatory program?

Q5: How resistant are elementary education majors to new information presented to them in their classes?

### Theoretical Framework

Research by Furlong and Maynard (1995) provided the framework for this study. From their research, they were able to identify five stages in student teacher development. The first stage, which they label "early idealism," manifests itself just prior to the student teaching experience. This stage creates a basis that can be used to study education majors early in their teacher training. During this stage education majors have common concerns and clear conceptualizations of teaching. They know the type of relationship they will establish with their students, the physical appearance of their classroom, and the atmosphere they hope to create. They seem to be influenced by their own history as students, and they begin their training with the belief that they already know a lot about teaching. Education majors at this stage feel that the process of learning and their role in this process just *happens* without a great deal of effort on their part.

Other researchers have found evidence of idealistic conceptions in elementary education majors and teachers just beginning their professional experience. Fuller and Bown's (1975) findings, considered the seminal work in the attempt to describe commonality of concerns in pre-service and in-service teachers, provide evidence of education majors identifying realistically with pupils but only in fantasy with the teaching role. In other words, education majors see the classroom through the eyes of a student and not through the eyes of a teacher. Education courses that deal with the teacher's realities are perceived as "irrelevant," and teachers are viewed negatively. One education major described the process of becoming a teacher as having "gone over to the enemy"

(Fuller & Bown, 1975, p. 91). Later findings by Adams (1982), Sitter and Lanier (1982), and Guillaume and Rudney (1993) support Fuller and Bown's findings and provide the framework for Furlong and Maynard's (1995) study.

The formation of such common conceptions has not been extensively studied, although teachers seem to be able to identify that they at one time had idealistic views of teaching. In his work, Burden (1979/1980a, 1980b) describes situations in which teachers reported "finding themselves conforming to their preconceived image of teacher" (p. 76). Lortie (1975) holds that early models of teaching are internalized and utilized later. This view can be supported by Schema theory (Schallert, 1982). Schemata are abstract structures that represent what one holds to be true about the world. They are expressed as a specific configuration of variables and provide a framework for further knowledge comprehension. Schemata are comprised of variables that can be identified by all those who share the same cultural experience (Graesser, Gordon, & Sawyer, 1979). Developed schema can bias and constrain the interpretation and acquisition of input information (Schallert, 1982). Education majors may have developed schemata as children in K-12 classrooms that later inhibit knowledge acquisition from their college coursework.

### Significance of the Study

People who want to become educators have spent at least a dozen years watching teachers from the perspective of a student. What effect this has on their professional development is largely unknown. This study seeks to add to that knowledge base.

Understanding the previously constructed ideas of elementary education majors has ramifications for improving the practice of teacher education. Furlong and Maynard (1995) found that:

Certain beliefs and expectations held by individual students either enhanced or mitigated against the development of "acceptable" or "useful" practical knowledge and skills. Particularly significant were students' existing understandings about the nature of teaching, and their vision of what the role of a teacher should be. If students hold simplistic or what are seen as "inappropriate" views of these issues, then students will need significant help if they are to fully appreciate the complexities and demands of becoming a professional educator. (p. 72)

Other researchers call for further study of student preconceptions about teaching.

Calderhead and Robson (1991) state:

There is considerable scope for the further investigation of the conceptions students have of learning to teach and how these influence the knowledge they acquire and its use in the analysis and practice of teaching. (p. 7)

A better understanding of the conceptions of education majors when they begin college could help teacher educators provide courses geared to confronting naive ideas of teaching. The ultimate result would be graduating an elementary education teacher who is better able to deal with the complexities of the profession.

### Definition of Terms

**Beginning Elementary Education Major:** Individuals who have made a decision to be a teacher and are enrolled in their first semester of courses at Montana State University.

**Children:** Students in kindergarten through twelfth grade.

Conceptions: Mentally constructed concepts or ideas that allow students to frame what is happening around them, as defined by Furlong and Maynard (1995).

Concerns: The body of concerns that have been identified by Furlong and Maynard (1995) and Fuller and Bown (1975) at Fuller and Bown's self stage of teacher development.

Culture: A group of people who regularly associate with each other and have shared attitudes, beliefs, and concerns.

Curriculum: An all-inclusive course of study that includes what is presented through coursework, and what the individual accepts from the instruction.

Freshman: A person in his or her first year of college.

Grounded Theory Study: A method of qualitative research that generates or discovers a theory that relates to a particular situation.

In-service teacher: an individual who is working as a teacher.

Junior: A person in his or her third year of college and taking the professional phase of the teacher education program at Montana State University.

Paraprofessional experience: An in-school experience that occurs between core course completion and student teaching. Paraprofessionals are placed in K-5 or K-8 schools while simultaneously enrolled in elementary methods classes.

Pre-service teacher: an individual who is enrolled in upper-division methods courses in a teacher preparation program.

Professional Development: the process of becoming a teacher.

### Assumptions, Limitations, and Delimitations

Certain assumptions were made about the participants in this study. First, the investigator assumed that all of the participants want to be elementary education teachers and that they have given at least cursory thought to what it will be like to teach. Data on elementary education majors in two stages of training were collected. These two stages were (a) freshman who have declared elementary education as their major, and (b) juniors in EDCI 301 (Paraprofessional Experience). It was assumed that all of the participants obtained a grade school education and have graduated from high school. Finally, it was assumed that the participants have not previously taught as a certified teacher.

The interviews were conducted in various locations around campus. These areas varied from quiet to very hectic locations. At times, questions needed to be clarified and restated. While the researcher tried to accommodate the participants, it is unknown how personal schedules and time constraints affected the information provided. The participants were given a survey, the Stages of Concern Questionnaire, and the Teaching Goals Inventory. Interviews were then scheduled based upon theoretical sampling from these instruments. These instruments were validated through focus group interviews with other pre-service teachers. Because of scheduling constraints, no freshmen were included in the focus group interviews. Twenty participants from each subgroup were studied. The impact of studying students in the fall as opposed to other times of the year is unclear. The fall was chosen for convenience. Due to time constraints, the emerging grounded theory was not applied to more heterogeneous groups after the initial two groups were

studied. Future studies may want to apply the results to first-year teachers, pre-service teachers in other stages of their education, or even grade school children in order to see where the theory holds true.

### Summary and Organization Outline

Past research has examined the conceptions teachers have of their profession. This research is focused on identifying and grouping these conceptions within a developmental model. Little research has been done which examines the possible origins of the conceptions or how they may impact learning and, therefore, the curriculum. Understanding these conceptions is important because it is apparent that certain beliefs held by pre-service teachers hinder their ability to develop appropriate understandings of what it is like to teach. The purpose of this study was to develop for teacher educators a grounded theory of how elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact their acceptance of the pre-block teacher education curriculum at Montana State University. In order to answer the major question this study was organized in the following way:

#### *Chapter 1*

##### Introduction to the Study

##### Statement of the Problem and Background

##### Problem Statement

##### Purpose Statement

Question

Theoretical Framework

Significance of the Study

Definition of Terms

Assumptions, Limitations, and Delimitations

*Chapter 2*

Literature Review

Chapter Introduction

Synthesis of the Literature

Criteria for Selecting the Literature

Themes

Context of the Problem

Current Understanding of the Problem

Review of Previous Research, Findings, and Opinions

Other Themes

Review of Methodologies

Evaluation of the Literature

Summary of the Review

Overall Weaknesses and Strengths

Gaps and Saturation Points

Avenues for Further Inquiry

Chapter Summary

*Chapter 3*

Research Methodology

Chapter Introduction

Participants

Population

Method of Sample Selection

Size, Demographics, Variables

Apparatus, Instruments, Materials

Function

Validity and Reliability

Development

Research Design

Rationale

Invalidity and Minimization

Procedure

Analysis Strategy

Assumptions, Limitations, Delimitations

Timeframe

Chapter Summary

*Chapter 4*

Results

Chapter Introduction

Results of Data Analysis

Discussion of the Meaning

Relationship to Prior Research

Negative and Positive Findings

Uncontrolled Factors Influencing Outcomes

Weaknesses in the Data

Resolutions of Contradictions in Findings

Summary of Results

Chapter Summary

*Chapter 5*

Conclusions

Chapter Introduction

Discussion of the Broader Implications

Answer to the Question/Developed Grounded Theory

Recommendations

Further Research

Procedural Adjustments

Replication

New Question

Implementation of Findings and Summary

## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

The purpose of this literature review was to establish the context and current understanding of how elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact their acceptance of the pre-block teacher education curriculum at Montana State University. The question was examined as a subset within the broad topic of teacher development. Existing models of teacher development have been constructed by (a) adapting theories of general cognitive development to teaching, (b) attempting to justify classroom practices in developmental terms, (c) inferring a theory from empirical research (Burden, 1990).

This literature review will develop the context by: (1) examining adult development in general; (2) reviewing an attempt to adapt developmental theories to teaching; (3) studying the empirically derived developmental models of Fuller (1969), Fuller and Bown, (1975), and Berliner (1988); (4) identifying attempts to qualify certain teacher training practices in developmental terms.

After developing the context of the problem, this literature review examined the current understanding of how elementary education majors' prior conceptions of the classroom, formed as students during their K-12 experience, impact learning. Three main

themes were explored: (1) Education majors develop concepts of the classroom early as students. (2) Education majors come to college with idealistic conceptions of the classroom. (3) Education majors' prior conceptions can form obstacles to instruction. Finally, this literature review examined previous research and methodologies and evaluated the literature.

### Criteria for Selecting the Literature

Literature was selected on the basis of three requirements. The first was the literature's relationship to either pre-service or in-service teacher development. The researcher was interested in literature that focused on teachers' prior conceptions, schemas, beliefs, or perceptions -- the ways teachers "see" teaching or the classroom. Empirical studies were preferred, but hypotheses from experts in the field were included.

The second requirement was the saturation and depth of research in the particular area. The researcher chose literature that was most often cited when the topic in question was well explored. In the case of adult development, the researcher chose theorists who typified a given body of knowledge. When the literature on the topic was sparse, all findings were included.

The third requirement was the reputability of the source. Only findings that were reported in professional journals or those from accredited institutions were included.

## Context of the Problem - Teacher Development Models

### Adult Development Theory

People who come to college to learn how to teach find themselves in the same general situation as other university students. Therefore, they should be examined through the perspective of adult student change theories. There are two broad categories of theories on the change college students experience. The first group of theories addresses the nature, structure, and processes of individual human growth. They can be classified as developmental theories. This class of theories includes psychological "stage" theories, which describe levels individuals pass through in a hierarchical sequence. The second group of theories, known as "college impact" models, focus more on variables that presume to exert an influence on one or more aspects of student change (Pascarella & Terenzini, 1991). The difference between the two categories of theories is related to the definitions of change and development. Change implies any alteration in a person's cognitive or affective characteristics. It does not need to be linear or follow any orderly process. Development implies a process of cognitive evolution through successive changes.

The framework for this study is based on the research of Furlong and Maynard (1995). Their work is located within the developmental paradigm; consequently, this review of literature will focus more on developmental theories than on college impact models.

Developmental theorists generally subscribe to the notion that development is a movement toward greater differentiation and complexity in the way people think and behave. Chickering (1974) divides adult development theorists into two groups: (a) psychosocial theorists, who examine sections of the age span; and (b) cognitive-structural theorists, who examine various psychological processes related to age (Burden, 1990). Oja (1990) further differentiates psychosocial theory into (a) life-age theory and (b) life cycle theory. Even though later researchers have identified further differentiation of development (typological and person-environment interaction models), the theories that will be examined more closely in this literature review are those described as psychosocial and cognitive-structural.

### Psychosocial Theory

Life-age theory seeks to identify an underlying order in the progression of people's lives over the adult years by examining discreet stages in detail. Levinson (1978) conducted seminal research in this area. He studied men in three phases of their lives: the novice phase of early adulthood, the settling down period, and middle adulthood. Levinson described the early adulthood period (ages 17-45) as the most dramatic of all ages. During this time young men are at or near their physical and intellectual peak. At the age of twenty, men are at their full height and strength. They are also at a pinnacle in memory, abstract thought, ability to learn specific skills, and ability to solve well-defined problems. These characteristics remain relatively stable until the age of forty. The transition into early adulthood occurs between the ages of 17 to 22, the

age of a majority of those in undergraduate teacher education programs. During this stage, the growing male is a boy-man; he is terminating his pre-adult self and at the same time starting to form his first adult self and to make the choices through which he establishes his initial membership in the adult world (Levinson, 1978). At the age of 20, men are trying to develop a personal and an occupational identity. They struggle to get others to regard them as equals and as "men" rather than "kids." The Early Adult Transition presents two tasks for the young man. The first is to end his past connections to the adolescent world. Existing relationships must be modified, and he must separate from some segments of his past. This includes a separation from the family into which he was born. It may include moving out of the house and becoming more independent. The second task requires that the young man make a commitment to entering the adult world. This includes making choices and defining options for the future. According to Levinson, men must accomplish these two tasks in order to progress to the next stage – the settling down period. It can be expected that men in Early Adult Transition have certain occupational misconceptions. Levinson found that "as this period begins, a young man's knowledge, values and aspirations for a particular kind of adult life are rather ambiguous and colored by private fantasies"(p. 75).

Levinson (1996) examined the lives of women separately from those of men. He categorized women into two groups: either homemakers or career women. He defined six discreet stages for each group: adolescent life, early adult transition, entry life structure for early adulthood, age 30 transition, culminating life structure for early adulthood, and mid-life transition. Women in the early adult transition period are between the ages of 18-

23. They, like men, must end past connections to the adolescent world and make a commitment to entering the adult world. This transition coincides with the move from high school to college. Some women, who had strongly dependent ties with their families, did not enter the transitional period until midway through their freshman year. Others entered the transitional period while in the last year of high school.

Levinson (1996) found that conceptions of gender played a key part in each young woman's early adult transition. The traditional homemaker wanted to be a good student, but not too good of a student. She sought to impress men with her attractiveness and intelligence, but not to compete with men. She made strong distinctions between the sexes and maintained a traditionally feminine stance. She hoped to be engaged or married by the end of college to a man of similar social class. She was not interested in high occupational achievement or a demanding career.

The career woman, in contrast, wanted to develop her own independence. She was appalled at the thought of being controlled or taken for granted by a man. She wanted to free herself from traditional gender roles. It was important to be feminine but not too feminine. She wanted to marry and have children but not within traditional boundaries. She wanted a career that was not limited by gender and one that provided personal satisfaction. It was easier for her to describe what she did not want rather than what she wanted.

Levinson (1996) also described the impact of college on a young woman's life. His findings indicate that women entered college having been successful students in high school. They then found themselves to be "small fish in a big pond" (p. 233). For the first

time they were forced to make major choices like deciding on a field of study and a career path. Choosing the major was difficult because it required self-exploration and clarifying their abilities. The choice of a major was strongly influenced by each young woman's attitudes towards gender. The career woman avoided "feminine" fields such as education.

The picture life-age theorists like Levinson paint of college students is contained within his description of the early adult transition. This is a time when both sexes are shrugging off adolescence and making commitments to adult life. They are defining options for the future and making difficult choices about their careers. Men may be choosing to teach based on earlier fantasies. Women may be choosing education because of their beliefs about gender.

Whereas life-age theorists focus on an individual's age to define stages of development, life-cycle theorists focus on major crises that a person faces in life. Two life-cycle theorists who have exerted the strongest influence on most psychosocial theories of college student development are Chickering and Erikson (Pascarella & Terenzini, 1991). Erikson (1963) proposed an eight-stage model to describe the physical, emotional, and psychological stages of development. Each stage is a task or challenge that people face in their lives. These stages are (1) trust vs. mistrust, (2) autonomy vs. doubt, (3) resolving guilt, (4) self-worth, (5) identity vs. role confusion, (6) intimacy vs. isolation, (7) productivity vs. stagnation, and (8) knowing oneself. Erikson felt that each of these stages presents the person with a dilemma requiring a decision. The choice the individual makes at this point determines if that person progresses to the next stage,

regresses to the previous stage, or stays at the present stage of development. These stages can occur at any time in life and are influenced by the environment. Identity vs. role confusion (stage 5) is the dominant task college-aged people must confront. This is the point at which people are attempting to integrate many roles (child, sibling, student, athlete, worker) into a self-image.

Chickering (1969) proposed seven vectors of student development. His model is more structured than Erikson's in that it describes a "magnitude and direction" and an increase in complexity of thinking by the individual. Development occurs within each vector. The seven vectors are (1) achieving competence – specifically in intellectual, physical, and social skills; (2) managing emotions; (3) developing autonomy – disengaging from traditional parental relationships; and (4) establishing identity. Establishing identity is central to Chickering's theory. It is the point where young men and women are clarifying their conceptions of "self." Development along this vector affects development along the following three vectors: (5) freeing interpersonal relationships – increased ability to interact with others; (6) developing purpose – "Where is my life going?"; and (7) developing integrity – following one's own beliefs.

### Cognitive-Structural Theory

While psychosocial theorists focus on the content of development (i.e., vectors, identity, phases), cognitive-structural theorists seek to describe the process of change, concentrating on the cognitive structures individuals create in order to give meaning to their worlds (Pascarella & Terenzini, 1991). Jean Piaget (1964) is generally credited with

originating this body of theories. Other important cognitive-structural theorists are Kohlberg, who defined a model of moral development; Perry, who explained intellectual and ethical development; and Gilligan, who focused specifically on the development of women. These models were chosen for this study because they address education majors' creation of themselves as teachers - specifically the aspects of intellectual, ethical, and moral development.

Piaget, a cognitive psychologist, started his career by studying biological structures; however, his greatest contribution was his research into the structures of the human mind. Piaget believed that humans develop not only in a physical sense, but also in a cognitive sense (Fosnot, 1996). Piaget was able to demonstrate that the same force that promotes biological change also promotes cognitive change. He described this force as *equilibration*. As the human mind is provided information of the outside world through the body's five senses, it processes the data by either *assimilating* it into previously constructed cognitive structures (schema), or by adapting the schema to the incoming information through *accommodation*. Equilibration is a dynamic process in which the mind constantly seeks balance between an actual change of the self (accommodation) and a reaffirmation of the world (assimilation). Piaget also stated in his theory of formal operational reasoning that cognitive development progresses through a series of four stages: (1) sensorimotor (birth to 2 years), (2) preoperational (2-7 years), (3) concrete (7-11 years), (4) formal operational (11 years and older), (Piaget & Inhelder, 1967). During the sensorimotor period, the child's cognitive system is limited to motor reflexes. Children build on these reflexes to develop more sophisticated procedures, and they learn

to generalize their activities to a wider range of situations. When children reach the preoperational thought stage, they acquire skills in the areas of mental imagery and language. They are very self-oriented and view the world from only a personal perspective. When children reach the concrete operations stage, they are more able to understand other points of view and take into account more than one perspective. Children at this age still do not possess the ability to perform abstract problems and do not consider all logical outcomes. The final stage in Piaget's model is formal operations. At this stage, children are able to think logically and abstractly. They are also able to grasp theoretical knowledge. Piaget felt that this was the ultimate stage of development, and that this was as powerful as thinking would get. Other cognitive-structural theorists have advanced several postformal stages. They feel that the reasoning of adults is more complex than the formal operations stage. Arlin (1975) used the idea of creative reflection to explain her belief that the whole formal operations structure changes. Arlin felt that during this change, problem-solving operations disappear and problem-finding operations appear. To find a problem requires reflection, and its form is partially determined by the possibility of a solution.

As a subset of the cognitive-structural theory, Perry's model tries to provide insight into *how* people think. Perry, along with other cognitive-structuralists, focuses on the process of change and concentrates on structures individuals build in their minds that help them give meaning to their world. Perry referred to these structures as "forms." Perry's model is comprised of nine "positions" which each individual progresses through in order. Development does not occur within each stage but during the transitions

*between* them (Perry, 1970). The use of the word "position" was important to Perry since he felt that positions accurately reflected each person's personal view and did not assume a fixed time at each phase of development.

Position 1 is characterized by the individual's focus upon "dualistic" thinking. This is when the individual sees the world in terms of right vs. wrong and black vs. white. The individual will seek "truth" through authority figures, and commitment to personal ideals is absolute. Development occurs when these absolutes are challenged, such as when ideals conflict or when a respected authority can't find a solution.

During positions 2-3, while still influenced by dualistic thought, the individual begins to respect diversity of views and to think more independently. Peers come to have more influence as critical thinking develops. Contrary views are no longer "wrong" (Pascarella & Terenzini, 1991). Instead, all competing views are seen as equally valid. Perry terms this period "multiplicity."

During positions 4-6, the individual builds to what Perry defines as the pivotal point at position 5. Up to this time, the individual has seen the world in varying degrees of duality. Now the individual sees knowledge and values as relative to the context where those values would be used. All opinions are not equally valid. Answers emerge based upon evidence and supporting arguments (Evans, Forney, & Guido-DiBrito, 1998). In position 6, individuals begin to see certain alternatives as having more value. They begin to be able to choose between competing views while still seeing need for debate.

Individuals moving through positions 7-9 have defined their identities and their responsibilities (Pascarella & Terenzini, 1991). They are able to commit to behaviors and

values, yet unlike in earlier periods they are also able to critically appraise opposing points of view. Commitments may be made but they are changeable based on new evidence that the individual may uncover. Perry termed this period as "commitments in relativism developed." He believed this period continues throughout a person's life.

Perry did not see development as a linear process. Instead, he viewed it in the form of a helix where the individual at a higher state of development confronts issues that recur. As individuals face a situation that they resolve, they then use that experience the next time the situation appears. Perry also believed that an individual's time in each "form" varies and that people go through "time-out" periods called "temporizing." He also saw two situations in which development regresses. One situation, called "escape," occurs when the person abandons responsibility; the other occurs when the individual retreats into dualism. After position 5, Perry's model seems to focus more on identity formation and less on cognitive growth.

Kohlberg began defining his theory of moral development while he was engaged in dissertation research at Chicago University. He discovered that children went through distinct stages of moral reasoning. From his initial research, Kohlberg broadened his theory to include other cultures and tried to use it to develop moral education programs in schools. Kohlberg's theory is that moral reasoning develops through a six-stage sequence grouped into three levels (Kohlberg as reported in Evans, et. al., 1998).

The first level, defined as preconventional, is where the individual responds to physical actions such as punishment/rewards, or in terms of the physical power of whoever enforces the rules. This level is comprised of two stages. At stage one, the

individual obeys in order to avoid punishment. For example, a student would not cheat due only to the fact that he or she may get caught (Peterson, 1986). At stage two, the individual obeys rules if they benefit him or her in some way. He or she is attempting to resolve moral situations while attaining some benefit and minimizing punishment. Elements of fairness are present, but they are interpreted in a "you scratch my back and I'll scratch yours" sort of way (Kohlberg & Hersh, 1977).

The second level in Kohlberg's theory is the conventional level. Maintaining family expectations or the expectations of another group is seen as beneficial regardless of rewards or consequences. There are feelings of loyalty and conformity to social order as well as identification with the group. Stages three and four are associated with this level. The third stage is a "good boy/girl" orientation (Pascarella & Terenzini, 1991). The individual judges morality based on the interpretations of others. There is conformity to the behavior of the majority, as well as a need for approval. The fourth stage is an orientation toward authority, rules, and social order. The individual's approach to morality during this stage is like a soldier's creed, where personal values are aligned with the duty values of society. Showing respect for authority, doing one's duty, and maintaining order are seen as important. This stage differs from stage one in that an underlying social order is the motivation in stage four, not simply a fear of what the authority might do.

Kohlberg defined the third level of moral development as the postconventional level. At this point there is a real effort by the individual to define personal moral values apart from any group. This level also has two stages. Stage five is where the individual

embraces the sense of right and wrong that has been agreed upon by the whole society. This has been described as the "official" morality of the American government (Kohlberg & Hersh, 1977). Agreements and contracts are seen as moral documents. The final stage (stage six) is where the individual forms truly personal morals. Equality, human rights, and respect for human dignity take precedence, and conscience guides actions. It has been hard to prove the existence of this stage, however, since no one (with the notable exception of Martin Luther King) seemed able to attain it in Kohlberg's studies (Kohlberg & Hersh, 1977).

There are several characteristics of Kohlberg's theory, which have been identified by others, that are worthy of note. The first is the fact that Kohlberg's theory constitutes a structured hierarchy which assumes that every individual at the same stage of development will exhibit consistent thinking (Walker, 1988). Another is the idea that all of the stages are "fixed." Individuals may spend varying amounts of time at different stages or may not attain all stages, but no one will skip a stage or stages on the way to moral development (Evans, et. al., 1998).

Gilligan's theory of development is a response to Kohlberg's model. In it she concludes that development theory has not taken into account the concerns and experiences of women. In the past, when women were analyzed using instruments fitting Kohlberg's theory, women scored at lower stages of development than men (Pascarella & Terenzini, 1991). Gilligan argues that women's concepts of self and morality are underrepresented in the major development theories. She feels the discrepancies in

development between the sexes are due to conceptually biased models, not to any actual disparity. Gilligan (1977) claims that

The men whose theories have largely informed the understanding of development have all been plagued by the same problem, the problem of women, whose sexuality remains more diffuse, whose perception of self is so much more tenaciously embedded in relationships with others and whose moral dilemmas hold them in a mode of judgment that is insistently contextual...The solution has been to consider women as either deviant or deficient in their development. (p. 34)

There is support for Gilligan's assertions from Freud and Piaget. Freud found that women's experience is influenced by feelings and emotions and that their ethics are different from men. Piaget uncovered differences in the sexes in childhood play (Evans, et. al., 1998). He found that girls were less structured than boys when establishing rules. Gilligan asserts that women are less structured in the sense that they emphasize relationships and care-giving in their moral decisions and not necessarily universal justice. This is the crux of the difference between Gilligan's model and Kohlberg's model, which is based on a goal of universal justice (Evans, et. al., 1998).

Gilligan's model of development in women includes three levels, each of which is separated by a transition period. The first level is an "orientation of survival," where the individual is unable to see a difference between personal decision and a moral alternative. The decision is the moral choice, and selfishness is the rule. At this point growth can occur if a problem forces the woman to seek another moral choice. The first transition occurs when the woman moves from a selfish perspective to a more responsibility-based perspective. Gilligan offered as an example of this transition a woman contemplating abortion who sees the child as a large responsibility and not just an object of personal

gratification. The second level of Gilligan's model is characterized by the individual placing connection with the group and consensus above personal moral judgments. Social acceptance and a desire to avoid hurting others is the motivation. The second transition occurs when the woman begins to see her own needs as more than just selfishness. She begins to question if she can include her own needs within her moral framework of care and concern for others. She debates the issue of selfishness vs. responsibility to self. According to Gilligan, a woman at this time can face the dilemma of choosing between morality and survival since at this point she begins to examine the logic of self-sacrifice as compared to the morality of giving care (Gilligan, 1977). The third and final level is attained when the woman embraces a moral obligation to avoid violence. At this stage, the individual has gained respect for herself. The internal debate between selfishness and responsibility disappears, and the woman now sees a moral equality between herself and others.

Gilligan argued that this theory more accurately represents women due to the differences in gender development. She called for further research in the field of human development to take into account the specific constructs in which women find themselves.

Perry's model of intellectual and ethical development, Kohlberg's model of moral development, and Gilligan's "different voice" model have elements in common. They all seek to explain the underlying structures in the mind that people use to make moral decisions and develop meaning. All three models are based upon Piaget's original work, which sought to understand intellectual development. All three theories seek to identify

*how* people think. Also, the theories are alike in that they do not see development occurring in a linear fashion. They postulate that there is a hierarchy to the stages but that the time between stages varies. Further analysis of these theories reveals more complex, underlying similarities. Each of them can be broken down into three major phases of development. In Perry's model these are dualism, multiplicity, and relativism. In Kohlberg's model they are preconvention, conventional, and post-conventional. In Gilligan's they are survival, goodness, and nonviolence.

Synthesizing the ideas of Perry, Kohlberg, and Gilligan provides a more comprehensive view of human development: (1) Dualism (Perry), Preconventional (Kohlberg), and Survival (Gilligan) - The individuals' moral construct at this point is not complex. It is an egocentric view requiring little contemplation. Decisions are made which do not account for multiple views. Individuals seem unable to "see" more than just a narrow perspective. An example of this is the woman in Gilligan's study of adolescents contemplating abortion. When asked if she had made the right decision, one woman answered that "there was no right decision because I didn't want the baby" (Gilligan, 1977). In Kohlberg's theory, the individual's moral construct is equipped to deal only with punishment and rewards. In Perry's model, the person can think only in terms of right/wrong, black/white. (2) Multiplicity, Conventional, and Goodness - At this point the individual's mental construct is able to take others' views into account. However, individuals at this stage have not developed to the point where they can *choose* a view. They seem content to adopt group expectations (Kohlberg), group consensus (Gilligan), and others' viewpoints (Perry). (3) Relativism, Post-Conventional, and Nonviolence - It

is at this point where the individual's moral construct has developed complexity. The person now has a construct capable of "seeing" multiple points of view and using them to make personal decisions. The individual is more flexible and less rigid in moral dilemmas and is able to adapt decisions according to context.

There are also differences between the three theories. In each theory the focus of the model in regard to development is different. Perry's model tends to focus on identity formation, Kohlberg's on universal justice, and Gilligan's on care-giving/relationships. An example of this difference in focus can be seen if we consider a college student who caught a fellow student cheating on an exam. In Perry's model, the individual would take his or her personal views of the world into account when making a decision. In Kohlberg's model, the individual would make a decision based on a belief that everyone seeks the same good, that cheating is wrong even if there might be mitigating circumstances. In Gilligan's model, the decision would be based on relationships and care, which are central to resolving an issue such as this in a woman's mind. A woman might take more into account how her decision could affect her or others' relationships with the person cheating. She might also be more responsive to any mitigating circumstances.

Finally, the similarities and differences within these three models are representative of all cognitive-structural models. While the motivation for developing moral constructs may vary with the individual, the structure in the mind that results is the central focus.

### Attempts to Adapt Development Theories to Teaching

Oja (1990) attempted to adapt developmental stage theory to how teachers acquire knowledge of the profession. She proceeded on the assumption that a developmental theory perspective would provide understanding of how teachers assimilate new information and implement new teaching strategies. She found that teachers operating at higher levels of moral and cognitive development were more flexible and able to see multiple points of view. They were also more effective in supervisory interaction with pre-service interns and in interpersonal interaction and group problem-solving with colleagues in collaborative action research. The developmental stages teachers had reached also affected their interactions in the school setting and their involvement with peers. Oja's findings suggest that developmental theory can be used to understand the organization, principles, strategies, and change in teachers' thinking and attitudes.

### Models of Teacher Development Based on Empirical Research

While teacher development can be defined as a subset of adult cognitive development, there have been empirical studies that focus specifically on the development of teachers. These models view teacher development as a progression through certain stages. Fuller viewed these through changes in teachers' concerns. Berliner (1988) viewed development through novice/expert theory.

Frances Fuller (1969) became interested in studying pre-service teacher growth while she was a teacher educator. She listened to students' complaints about the irrelevance of coursework and became interested in how she could make it more relevant. Her focus on the concerns of education majors led her to define three stages of teacher development: the self-stage, where teacher concerns are egocentric; the task stage, where concerns shift to issues such as creating effective lessons and being seen as a good teacher; and the impact stage, where the concerns become oriented towards student achievement.

Fuller and Bown (1975) found four distinct stages of growth. In the first stage, pre-service teachers identify with students rather than teachers. They have few concerns about their abilities to work with children; yet they do not appear to have developed a view of themselves as "teachers." This stage appears to be a time when ignorance is bliss. In the second stage, teachers are concerned about their personal survival as a teacher. They appear to have started contemplating what it is like to be a teacher. Issues such as class control and mastery of content are characteristic of this stage. During the third stage, teachers have concerns about their teaching performance, about limitations and frustrations of the teaching situation, and about the demands being placed on them. In the fourth stage, teachers become concerned with the social, emotional, and learning needs of the pupils.

Further research has supported Fuller's claims for a stage model of teacher development. Sitter and Lanier (1982) reported that there were common concerns among pre-service teachers. Adams (1982) concurred but determined that these concerns were

not necessarily developmental. Similar findings were reported by Fields and Reddick (1979), Katz (1972), and Furlong and Maynard (1995). All reported stages in line with the findings of Fuller and Bown. Furlong and Maynard further support Adams' findings. It appears that education majors' concerns are not hierarchical. Attainment of a previous stage is not necessarily required for progression. Also, not all teacher candidates will reach each stage or spend equal amounts of time at each.

Berliner (1988) viewed the development of teachers through increasing expertise in five stages: (1) Novices – this is a stage for learning commonplace elements of teaching. At this stage novices can use higher-order questioning skills and give praise for correct answers. (2) Advanced beginner – here teachers can recognize similarities across contexts. They can start to apply “strategic knowledge” and know when to break or follow rules. The context begins to drive behavior. (3) Competent – teachers at this stage set priorities and decide on plans. They have rational goals and choose appropriate methods to teach them. (4) Proficient – at this stage teachers start to use intuition to help in decision making. (5) Expert – here teachers have an intuitive grasp of the situations arising in the classroom, and they seem to sense what would be appropriate responses to make. Berliner's theory is not specific to teachers. His empirical data was collected by studying novices and experts in a wide range of fields.

#### Justifying Teacher Development Practices in Developmental Terms

The stages of teacher development have been applied to staff development programs and the supervision of teachers. In staff development there have been attempts

to match content and delivery of information to the individual's stage of development.

Early stage teachers receive highly structured and directive development programs.

Teachers at the later stages help to design their own staff development. Often this training is non-directive and collaborative in nature (Burden, 1990).

Glickman (1981) has suggested a model of supervision that parallels the recommendations presented for staff development. The supervisor approaches teachers at the early stages with a directive approach; he or she is explicit and assumes much of the responsibility when setting standards. When approaching teachers at the later stages of development, the supervisor is non-directive. It becomes the teacher's responsibility to analyze and solve his or her own instructional problems.

### Current Understanding of the Problem

There are three themes that run through the research on education majors' conceptions about teaching. These are (1) Education majors develop concepts of the classroom early as students, (2) Education majors come to college with idealistic conceptions of the classroom, and (3) Education majors' prior conceptions can form obstacles to instruction. Kagan (1992) reviewed existing literature on the role played by preexisting beliefs and images early in a teacher education program. She reported findings consistent with these three themes.

By the time education majors start the specific training required to be teachers, they have been involved in numerous classroom experiences. Lortie (1975) proposed that

by projecting themselves into the teacher's position, children in classrooms come to imagine what teachers feel and think. This role-taking likely occurs among all students and may contribute to the idea that "anyone can teach." However, the propensity for role-taking may be especially great when the individual has already decided to be a teacher (Lortie, 1975). Calderhead and Robson (1991) studied twelve student teachers in order to better understand the conceptions they held upon entry to teacher training. The interviews he had with these students led him to state, "Students were found to hold particular images of teaching, *mostly derived from their own experiences in schools as pupils*, which were sometimes highly influential in their interpretation of the course and of classroom practice" (p. 1). The students seem to build their conceptions of teaching from episodic memories, relating to events from their personal past experience as children in classrooms. Lasley (1980) also supported the notion that education majors develop conceptions about teaching early in life. He credited schooling, along with other cultural factors, as a major influence on the beliefs of entering education majors. He stated:

Beliefs evolve as individuals are exposed to the ideas and mores of their parents, peers, teachers, neighbors, and various significant others. They are acquired and fostered through schooling, through the informal observation of others, and through the folklore of a culture, and they usually persist, unmodified, unless intentionally or explicitly challenged. (p. 38)

Gliessman (1991) studied education majors' remembrances of early childhood school experiences by having them interpret a hypothetical classroom event -- cheating. Gliessman found that how pre-service teachers viewed cheating as children impacted the way they viewed it as adults. Bird, Anderson, Sullivan, and Swidler (1993) felt that

education majors enter teacher preparatory programs as “experienced actors in the schools that they have attended.” (p. 6).

Chan (1999) analyzed the beliefs of student teachers in two Hong Kong teacher-training programs. She examined student teachers’ beliefs when they first entered the program. She discovered that pre-service teachers develop their beliefs about teaching and learning before entering their initial teacher training programs. She also found that the content of their beliefs was closely related to their past experiences. This seems to support Calderhead and Robson’s (1991) assertion: “Clearly, students start their teacher training with different ideas about teaching and about their own professional development” (p. 7). It also seems to support Calderhead and Robson’s and Lortie’s belief that conceptions about teaching are developed as children. Lasley (1980) found that pre-service teachers come to college with several idealistic conceptions about teaching. The first is that they see teaching as rewarding and fulfilling only. They do not conceive of how the difficulties of teaching can lead to dissatisfaction with teaching as a career. The second conception they have is that people who like children are effective teachers. They cite their love of children as an important predictor of their classroom success. Buchmann and Schwille (1983) believed that teaching candidates begin with loosely formulated conceptions that explain what teachers do and how children learn in classrooms. Hollingsworth (1989) thought that the conceptions education majors have at the onset of preparation serve as filters influencing how they make sense of coursework content and their roles as teachers.

The last theme to be developed is that elementary education majors' conceptions about teaching can form obstacles to instruction. Bird (1993) attempted in his course to help education majors consider alternate conceptions about teaching. He found that students were highly resistant to replacing existing conceptions with new ones. He noted how teacher education courses involve an encounter of old and new ideas in the student's mind, some derived from their experience in schools and some from their experience in the university. Bird proposes that education majors' prior conceptions provide them with what they perceive as reasonable alternatives to the conceptions presented in their coursework. These conceptions seem to be rigidly set in place, resistant to change, and cogent to the pre-service teacher. Weinstein (1990) discovered that even after a course designed to confront the realities of teaching, education majors retained their affective definitions and conceptions of good teaching. However, Joram and Gabriele (1997) found that specifically targeting prior conceptions in instruction resulted in changing education majors' conceptions about teaching. Carter (1990) discussed the powerful effects of pre-service teachers' preconceptions on their interpretations of teaching events. She presented the case of Donald, a pre-service teacher:

Viewed across the semester, Donald's early focus was clearly on his own personal reactions to teaching, and he returned to this topic regularly. He devoted little attention to topics related to classroom processes and instruction over the course of 13 weeks. (p. 23)

When Donald had a negative experience teaching, he expressed agitation, anger, and bewilderment about why things happened the way they did. He seemed unable to accommodate the new information. Hollingsworth (1989) believed that current practices in teacher education do not force education majors to face the impact of their prior

beliefs. Instead, she felt that teacher education programs are designed to capitalize on the preexisting conceptions that education majors hold, thereby ensuring that pre-service teachers turn out to be very similar to existing teachers. Teacher education courses do this by creating a learning environment that closely resembles pre-service teachers' educational backgrounds. In her dissertation, Pulver (1996) examined the conceptions held by pre-service elementary students about the teaching of mathematics. She found that their conceptions about teaching were linked to past experience. She also stated that elementary education majors "create their own patchwork of practice by working new learning into previously held beliefs rather than altering previously held beliefs" (p. 166). Kagan (1992) concluded from her review that each study documented the central role played by preexisting beliefs/images and prior experience in filtering the content of education course work.

### Review of Previous Research, Findings, and Opinions

Teacher development is the context in which elementary education majors' prior conceptions of the classroom, formed as students during their K-12 experience, impact their professional development. Teacher development can be viewed through three different models: (a) adapting theories of general cognitive development to teaching, (b) attempting to justify classroom practices in developmental terms, (c) inferring a theory from empirical research.

It was necessary to identify major theories in adult development in order to: (1) better understand the college education major, and (2) better understand how adult developmental theories impact the area of teacher development. These major theories were psychosocial theory and cognitive-structural theory.

Current understanding of the problem is that: (1) education majors develop concepts of the classroom early as students, (2) education majors come to college with idealistic conceptions of the classroom, and (3) education majors' prior conceptions can form obstacles to instruction.

#### Other Themes – Framework

Furlong and Maynard (1995) provide the framework for this study. They found that education majors enter teacher preparatory programs with idealistic conceptions influenced by their own histories as students. They also found that education majors begin their training with the belief that they already know most of what they need to be a teacher. The findings in the literature support Furlong and Maynard's contentions that education majors develop concepts of the classroom early in life as students, and that they start college with idealistic conceptions about teaching which have been reinforced through years of watching teachers. These conceptions then form obstacles to learning from coursework.

### Review of Methodologies

Most of the studies cited regarding education majors' prior conceptions were based in a qualitative research paradigm. Their purposes were to explain and gain insight into education majors' beliefs, conceptions, attitudes, and 'ways of seeing' the classroom. Hypotheses were tentative and evolved as information was gathered. Many studies were conducted in "naturalistic" settings. They used rich descriptions to explain their findings and acquired an in-depth understanding of a few participants. Most used interviews as a mode of data collection. Furlong and Maynard (1995) used the principles of progressive focusing. Their empirical study was informed by the literature throughout the data collection.

### Evaluation of the Literature

#### Summary of the Review

The previous findings paint a picture of how elementary education majors' prior conceptions of the classroom, formed as students during their K-12 experience, impact their acceptance of teacher education curriculum. The literature on college student development describes a body of individuals who are in the middle of a transition into adulthood. They are undergoing changes in cognitive, ethical, and moral reasoning. Within this set are education majors. While they are experiencing many of the same choices and concerns relative to their college peers, they also face specific fears, training,

and transformations required to be a teacher. Their transformation into becoming a teacher is impacted by the conceptions they have developed as children through years of exposure to teachers. They can role-play being a teacher, but they do not realize that this is a weak facsimile reflecting the perceptions of a child. These ideas are intuitive and imaginative but not necessarily accurate or real. Students' well-developed, if inaccurate, conceptions of teaching act as filters that make it difficult for them to assimilate the information provided in their coursework.

#### Overall Weaknesses and Strengths

There was not a large body of literature on how education majors' prior conceptions impact learning and, therefore, curriculum. Searches of the ERIC database, the PSYC INFO database, and doctoral dissertations revealed less than a dozen resources that addressed the problem specifically. However, the researcher feels that there was enough written by reputable sources on which to base this study.

There was a large body of knowledge on adult development. Many researchers have proposed different theories. In order to limit the scope, this literature review was designed to provide examples of predominant theories. It was not designed to be a comprehensive review of all speculation about adult development.

### Gaps and Saturation Points

The largest gap that the researcher discovered provided the basis for this study. Several researchers have described how education majors form conceptions about teaching as children (Calderhead & Robson, 1991; Furlong & Maynard, 1995; Lasley, 1980; Lortie, 1975). Several others describe how prior conceptions about teaching can obstruct knowledge acquisition in teacher education programs (Bird, 1993; Carter, 1994; Weinstein, 1990). No study was discovered that assessed how prior conceptions, formed as children, might impact acceptance of teacher education curriculum at the university level.

### Avenues For Further Research

Several areas for further research are apparent from the literature review:

1. How might prior conceptions about teaching lead to the general population's opinion that "anyone can teach"?
2. What might be the effect of teacher personality on acquisition of information in a teacher preparatory program?

### Summary

This chapter presented a literature review that established the context and current understanding of how elementary education majors' prior conceptions of the classroom, formed as students during their K-12 experience, impact their acceptance of the pre-block

teacher education curriculum. The question was examined as a subset within the broad topic of teacher development. Existing models of teacher development were presented. These included: (a) adapting theories of general cognitive development to teaching, (b) attempting to justify classroom practices in developmental terms, and (c) inferring a theory from empirical research.

This literature review developed the context by: (1) examining adult cognitive development in general, (2) reviewing an attempt to adapt cognitive developmental theories to teaching, (3) studying the empirically derived developmental models of Fuller (1969) and Berliner (1988), and (4) identifying attempts to qualify certain teacher training practices in developmental terms.

After developing the context of the problem, this literature review examined the current understanding of how elementary education majors' prior conceptions of the classroom, formed as students during their K-12 experience, impact learning. Three main themes were explored: (1) Education majors develop concepts of the classroom early as students, (2) Education majors come to college with idealistic conceptions of the classroom, and (3) Education majors' prior conceptions can form obstacles to instruction. Finally, this literature review examined previous research and methodologies and evaluated the literature.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### Introduction

This study was based on the five main research questions laid out in Chapter One. First, when do elementary education majors first develop their conceptions of teaching? Second, what are education majors' prior conceptions of teaching? Third, how accurately do elementary education majors believe their prior conceptions represent the realities of teaching? Fourth, what effect do the prior conceptions of elementary education majors have on their acquisition of knowledge in a teacher preparatory program? Lastly, how resistant are elementary education majors to new information presented to them in their classes?

This chapter will describe the participants, the data collection instruments, and the research design of this study. Assumptions, limitations, delimitations, and a timeframe will also be presented. Answering the transcendent question will remain the focus of this research: How do elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact their acceptance of the pre-block teacher education curriculum at Montana State University?

### Participants and Teacher Education Curriculum

Two groups of education majors were studied. The first group consisted of freshmen who had declared elementary education as their major. The second group consisted of individuals enrolled in the paraprofessional experience. This latter group was typically comprised of junior-level students beginning the professional phase of the elementary education program, who had completed the core coursework needed for entry into the professional phase. Neither group had started the block/in-school experience at the time the written instruments were completed.

The freshmen entering Montana State University, who declared elementary education as a major, met the university's definition of freshmen and the university's entrance requirements. The university defines freshmen as those who have completed high school or its equivalent and have never attended a college or university, or who have attempted less than twelve quarter or semester college-level credits at another regionally accredited college or university. Freshmen are required to meet certain criteria for admission. They need to have graduated from a high school that is fully accredited by the appropriate state office of public instruction, or they need to have passed the General Educational Development (GED) exam. They must meet one of four criteria: a cumulative grade point average of 2.5, an ACT score of 22, an SAT score of 1030, or a ranking in the upper half of their graduating class. They also must have completed a college preparatory curriculum that includes four years of English, three years of

mathematics, three years of social studies, two years of laboratory science, and two years of either foreign language, computer science, or performing arts.

The following is taken from the Montana State University Department of Education website. It succinctly describes the course of study to become a graduate in elementary education and to become eligible for teacher certification in the state of Montana.

#### Freshman Year

#### Credits

*Take one of the following:*

|                                   |   |
|-----------------------------------|---|
| HDCF 150S--Lifespan Human Devlpmt | 3 |
| HDCF 260--Hum Dev Mid Chldhd Adol | 3 |
| EDCI 102--In-School Experience    | 1 |
| EDCI 240--Intro Multicultural Ed  | 2 |
| ENGL 121W--College Writing I      | 3 |

*Take one of the following:*

|                                  |   |
|----------------------------------|---|
| GEOG 105SG--World Regional Geog  | 3 |
| GEOG 201SG--Human Geography      | 3 |
| MATH 130--Math-Elem Teachers I   | 4 |
| MATH 131M--Math-Elem Teachers II | 4 |
| Verbal Core Elective             | 3 |

### Applied Fine Arts Restricted Core Elective

*Take one of the following:*

|                                     |   |
|-------------------------------------|---|
| ARCH 121F--Intro to Design          | 3 |
| ART 114F--Art Fundamentals          | 3 |
| HHD 205FG--Dance as Cultural Exp    | 3 |
| HHD 207F--Dance Appreciation        | 3 |
| MTA 103F--Understanding Photography | 3 |
| MTA 104F--Understanding Theatre     | 3 |
| MTA 218FG--Internatnl Film & TV     | 3 |
| MUS 102F--Fund of Music Creation    | 3 |

### Natural Science Restricted Core Elective

*Take one of the following:*

|                                 |   |
|---------------------------------|---|
| BIOL 100N--Organism Function    | 3 |
| MB 101N--Micro in Today's World | 4 |

*Take one of the following:*

|                               |    |
|-------------------------------|----|
| ESCI 111N--Physical Geology   | 4  |
| ESCI 112N--Physical Geography | 4  |
|                               | 33 |

## Sophomore Year

## Credits

Social Science Restricted Core Elective  
and if Needed, G Multicultural or Global

*Take one of the following:*

|                                    |   |
|------------------------------------|---|
| ANTH 101SG--Intro to Anthropology  | 3 |
| ECON 101S--Econ Way of Think       | 3 |
| ECON 250SG--Honors Economics       | 4 |
| GEOG 201SG--Human Geography        | 3 |
| NAS 100SG--Intro Native Am Studies | 3 |
| NAS 201SG--Amer Indians in Mont    | 3 |
| NAS 242SG--Am Indians in Cont Soc  | 3 |
| POLS 241SG--Intro to Interntl Rel  | 3 |
| PSY 100S--Intro to Psych           | 3 |
| SOC 101S--Intro to Sociology       | 3 |
| EDCI 208--Ed Psy Hum Dev Sch Age   | 3 |
| EDCI 223--Basic Media Production   | 1 |
| EDCI 320--Found of Instr Compute   | 2 |
| HDHL 106--Drug Hlth Issue for Ed   | 3 |

## History Core Elective

*Take one of the following:*

|                                    |   |
|------------------------------------|---|
| HIST 155H--Amer & Wrld Before 1865 | 4 |
| HIST 156H--Amer & Wrld After 1865  | 4 |
| History Elective                   | 3 |

## English Literature

## Restricted Humanities Elective

*Take one of the following:*

|                                |   |
|--------------------------------|---|
| ENGL 123H--Intro to Lit Stdy   | 3 |
| ENGL 214H--Regional Literature | 3 |
| ENGL 330H--Women & Literature  | 3 |

## Fine Arts Restricted Elective

*Take one of the following:*

|                                  |   |
|----------------------------------|---|
| ART 202FG--Ancient-Medieval Art  | 3 |
| ART 203F--Renaissance-Modern Art | 3 |
| MTA 101F--Film in America        | 3 |
| MUS 210F--Enjoyment of Music     | 3 |

|                        |   |
|------------------------|---|
| MUS 312FG--World Music | 3 |
|------------------------|---|

*Take one of the following:*

|                                |   |
|--------------------------------|---|
| CHEM 121N--Intro Gen Chemistry | 4 |
|--------------------------------|---|

|                               |   |
|-------------------------------|---|
| PHYS 103N--Our Physical World | 4 |
|-------------------------------|---|

|                               |   |
|-------------------------------|---|
| PHYS 201N--Physics by Inquiry | 3 |
|-------------------------------|---|

|                            |   |
|----------------------------|---|
| POLS 206S--Govt of the U.S | 3 |
|----------------------------|---|

|           |    |
|-----------|----|
| Electives | 14 |
|-----------|----|

34-35

Note: Courses listed in the sophomore year include a total of 7 credits that are to be combined with the required courses listed in the first semester of the junior year. Timing and scheduling on the student's part will determine which 7 credits will be combined with the first semester junior required courses.

|             |         |
|-------------|---------|
| Junior Year | Credits |
|-------------|---------|

First Semester

|                           |   |
|---------------------------|---|
| EDCI 360--Found of Assmnt | 2 |
|---------------------------|---|

|                                |   |
|--------------------------------|---|
| EDCI 469--Pub Sch Amer Society | 2 |
|--------------------------------|---|

|                                 |   |
|---------------------------------|---|
| EDEL 304--Children's Literature | 3 |
|---------------------------------|---|

HDCF 356--Exceptional Needs 0-21      3

Note: 7 credits from courses listed in the sophomore year are to be combined with the 10 credits listed in the junior year, first semester.

Second Semester      Credits

Block A or Block B

*Block A*

EDEL 301--Paraprofessional Exp      2

EDEL 305--Princ & Pract of Emergent Lit (K-3)      4

EDEL 332--Teaching Art      3

EDEL 333--Teaching Mathematics      3

EDEL 336--Teaching Music      3

*Take one of the following:*

EDEL 401--Ed Plan & Mgmt      1

EDEL 402--Ed Mgmt & Discipline      1

33

Senior Year

Credits

First Semester

Block A or Block B

*Block B*

|                                   |   |
|-----------------------------------|---|
| EDCI 306--Hlth Enhancement        | 1 |
| EDEL 301--Paraprofessional Exp    | 2 |
| EDEL 308--Hlth Enhance Instr Tech | 1 |
| EDEL 309--Chld Hlth Enhance Mthds | 1 |
| EDEL 313--Teach Soc Studies       | 3 |
| EDEL 325--Teaching Elem Science   | 3 |
| EDEL 405--Tch Lit in Gr. 4-8.     | 4 |

*Take one of the following:*

|                                |   |
|--------------------------------|---|
| EDEL 401--Ed Plan & Mgmt       | 1 |
| EDEL 402--Ed Mgmt & Discipline | 1 |

Certification in first aid with CPR required prior to student teaching semester.

Second Semester

Credits

Student Teaching Semester

|                            |       |
|----------------------------|-------|
| EDEL 410--Student Teaching | 10/12 |
|----------------------------|-------|

EDEL 414C--Professional Issues 2

28-30

A minimum of 128 credits is required for graduation; 42 of these credits must be in courses numbered 300 and above.

Students enrolled in EDEL 301 have met department requirements for admittance into the last two professional years of the program. They are juniors or seniors with most of their course work completed and are anticipating student teaching. The paraprofessional experience is a required practicum prior to student teaching. It is a field experience, which culminates in 112 hours of classroom experience in one semester or 224 hours over two semesters. EDEL 301 is required for graduation. Elementary education students at MSU must take two semesters of the course (block A first semester, block B second semester). The course is organized so that teacher candidates work in a public school classroom under the supervision of a certified teacher for half of the day, and then they attend teacher method classes for the other half of the day at the university. These classes meet four days a week, Monday through Thursday. On Friday, the teacher candidates meet for one hour with a university supervisor to discuss and reflect on observations they made while in the public school classroom. The following illustration describes where in the curriculum sequence each group was studied.

Seniors

STUDENT TEACHING

Juniors

BLOCK A

PARA I

BLOCK B

PARA II

**\*\* GROUP # 2 (BEGINNING PARAPROFESSIONAL STUDENTS)**Freshmen/  
Sophomore

PRE-PROFESSIONAL COURSES

CORE CURRICULUM

**\*\* GROUP # 1 (ENTERING FRESHMEN)**Method of Sample Selection

Theoretical sampling was the method used to select participants. Creswell (1998) claims that this is the method of choice for a grounded theory study. The theoretical sampling technique required that the researcher identify and select individuals who could contribute to the evolving study. In this case, that meant elementary education majors at different points in their education who had decided to teach before and after high school

as reported on validated instruments. The decision of which education majors to study was based on results from an earlier pilot study. The pilot study included five participants. Results from that study suggested that the age people decide to teach can be a factor in conceptions about teaching. Future researchers may choose to select a more heterogeneous sample to study (e.g., grade school students or first-year teachers). The reason other researchers may choose to move to a heterogeneous sample is to confirm or disconfirm the conditions under which the theory holds. The theoretical sampling method becomes a feedback loop in which a developed theory is tested, defined, and re-constructed. It seeks to generate information on which the emergent design and grounded theory can be based (Lincoln & Guba, 1985). It also requires that the researcher use personal theoretical knowledge to make informed judgments about subgroup selection as the process unfolds. Sampling is terminated when the researcher feels that saturation of relevant categories has been achieved. Glaser and Strauss (1967) support this conclusion. They state:

Learning this skill takes time, analysis, and flexibility, since making the theoretically sensitive judgment about saturation is never precise. The researcher's judgment becomes confidently clear only toward the close of his joint collection and analysis, when considerable saturation of categories and many groups to the limits of his data has occurred, so that his theory is approaching stable integration and dense development of properties. (p. 64)

Theoretical sampling is a way of choosing participants purposefully; consequently, it fits the qualitative nature of this study. Literature and personal experience indicated that elementary education majors develop conceptions about teaching early in their educational experience. These conceptions then interfere with later learning about the teaching profession. Therefore, samples were selected from each of two groups of

education majors. It was not possible to study all heterogeneous subgroups that might be identified. Issues that arose from the process did at times redefine the course of the research. This flexibility to move into issues that had not been anticipated is acceptable (Smith & Pohland, 1969). The approach taken was based on existing literature on the topic and the criteria for sampling theoretically.

### Size and Demographics

Twenty participants for each cross-sectional group were selected for interviews from a total of 67 freshmen and 42 juniors who filled out the surveys and questionnaires. The total number of interviewed participants was 40.

Montana State University is a land grant university with a total undergraduate enrollment of 10,542, of whom 1,290 are declared education/health and human development majors. The student body is 55% male, 83% white, and 73% in-state residents. The average age of the undergraduate population is 22. The undergraduate education majors reflected these demographics except with regard to gender. The elementary education majors involved were predominately female.

### Apparatus/Instrument/Materials

#### Function, Validity, Reliability, and Development

This study used four separate methods of data collection: (a) interviews, (b) the Stages of Concern Questionnaire, (c) survey, and (d) the Teacher Goals Inventory.

The interview was designed to understand what conceptions the participants held about teaching and when those conceptions were established. It was also designed to understand how prior conceptions might be influencing the participants' learning of the pre-block teacher education curriculum at Montana State University. Interview questions were based around this main theme. An interview protocol was used during interviews (Appendix A).

The Stages of Concern Questionnaire (Appendix B) is a validated instrument designed to measure conceptions about teaching from the dimension of teacher concerns. It is a 45-item instrument, and it asks the participant to assign a value ( a range from 1 = not concerned to 5 = totally preoccupied) to a specific concern. It was designed by Hall, George, and Rutherford, (1990) and is based on Fuller's research. Rogan, Borich, and Taylor (1992) recently validated the questionnaire. They found:

The Stages of Concern Questionnaire examined in this study yielded a satisfactory factor structure and high reliabilities for each of the three scales: self, task, and impact. Fuller's three stages of concern and the general notion that the concerns of teachers change over time appear to have been confirmed. (p. 46)

Rogan, Borich, and Taylor do question the validity of understanding Fuller's findings as a strict developmental model. They feel that the theory is more accurately understood as

dimensions around which teachers might focus their concerns at any point in their training and careers. The instrument was valid for the purposes of this study because the researcher was interested in placing participants within the stages proposed by Fuller (1969). The researcher was not interested in measuring concern development. However, the instrument was not able to measure concerns that occur in pre-service teachers prior to the "self" stage. Cronbach's alpha reliability for the "task" items is .84, for "self" items is .91, and for "impact" items is .94 (Hall & Rutherford, 1990).

The survey (Appendix C) is a piloted instrument based on Furlong and Maynard's (1995) findings. It has four questions designed to measure conceptions about teaching and five questions that report demographic data. The original instrument contained twenty items, was first developed by Robert Carson at Montana State University, and was piloted in 2000. A subsequent validation conducted by the researcher of this study asked 35 participants to rephrase each question after they took the original survey. Changes were then made to correct deficiencies in the original instrument.

The Teacher Goals Inventory (Appendix E) is a 52-item instrument designed by Angelo and Cross (1993) to assist faculty in identifying instructional goals and matching assessment techniques to those goals. The participant is asked to rate the importance of each item on a Likert scale of 1-5. From a cumulative score, participants are then able to classify their instruction in one of six categories. The instrument was validated for this specific study because the researcher recognized differences between the original design and what this study intended to measure. After discussions with pre-service teachers, the researcher decided to isolate the last item from the other 51 and to report results

separately. Cronbach's alpha for each instructional goal is: I=.77, II=.79, III=.71, IV=.84, V=.85, and VI=.86 (Angelo & Cross, 1993).

### Research Design

#### Rationale

This study fit within the qualitative research paradigm. It used a cross-sectional, grounded theory design. There were two reasons for using a qualitative approach: (1) it fit the researcher's personal philosophy about the nature of knowledge, and (2) it is the type of research used in studies that build the framework for this study.

A cross-sectional technique was used to study past conceptions. Asking education majors to examine their memory and then to determine what those memories mean would be subject to suspicion. The argument could be made that memories are not retained accurately for long and that memories are susceptible to reconstruction. A cross-sectional analysis that measured the present conceptions of education majors avoided the difficulties inherent in memory recall (Joram, 2001).

The grounded theory design was used because this study seeks to develop a theory that is suggested in the literature and through personal experience but has not been specifically researched. In-depth, structured interviews were used, built around categories that defined the issue.

### Invalidity and Minimization

As with most qualitative designs, there is a need to establish "credibility" (Eisner, 1990). This is because the researcher designs the study and collects, manages, and analyzes the data. Therefore, structure must be increased to reduce subjectivity. In this study the researcher used focus groups, member checking and an auditor to augment structure and credibility.

Two pilot studies were conducted to determine the scope of this study and to validate the instruments used to gather data. The pilot studies involved as many as 35 elementary education majors. From these large groups the researcher discussed the findings with groups of five. From these discussions the researcher tried to expose underlying problems in the instruments and the design of the study (McNiff, Lomax, & Whitehead, 1996).

Member checking is a procedure that improves validity (Creswell, 1998). The approach involves taking data, analyses, interpretations, and conclusions back to the participants so that they can judge the accuracy and credibility of the account. This technique is considered by Lincoln and Guba (1985) to be the most critical for establishing credibility. The researcher provided the information to participants in person when possible and by phone when schedules precluded face-to-face member checks.

The auditor in this study was charged with carefully examining both the process and the product. The auditor was chosen because she was familiar with qualitative research having completed a similar study in fulfillment of her doctorate at Montana

State University in the department of education. First, she reviewed the proposal. Second, the auditor reviewed the pilot study. Next, the auditor reviewed the data collected. Finally, the auditor examined the data analysis. The auditor supported the design of the study and concurred with all findings from the data analysis.

### Procedural Timeframe

2001

- |             |                                                                                                                                                                                        |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| March 2     | Pilot study begins, involving five EDEL 301 participants.                                                                                                                              |
| March 27    | Pilot study ends.                                                                                                                                                                      |
| March 28    | Auditor reviews pilot study. Changes made.                                                                                                                                             |
| April 9     | Proposal committee meeting.                                                                                                                                                            |
| April 12-30 | Pilot study involving thirty-five EDEL 301 participants to validate instruments (TGI, SCQ, and Survey). Changes made.                                                                  |
| July 17-    |                                                                                                                                                                                        |
| Aug 30      | Freshmen students presented with consent form, survey, Stages of Concern Questionnaire, and Teaching Goals Inventory during new student orientation. Interviews with this group begin. |
| Sept. 7     | EDCI 301 students presented with consent form, survey, Stages of Concern Questionnaire, and Teaching Goals Inventory. Interviews of this group begin.                                  |
| Sept. 30    | Auditor review.                                                                                                                                                                        |

|          |                         |
|----------|-------------------------|
| Oct. 10  | Interviews end.         |
| Oct. 10- |                         |
| Dec 30   | On-going data analysis. |
| 2002     |                         |
| Feb 10-  |                         |
| Feb 20   | Member checks.          |
| July 9   | Auditor review.         |

### Analysis Strategy

Data was analyzed using the constant comparative method described by Lincoln and Guba (1985). The participants were studied independently, and then common themes explored. First, the researcher compared incidents and intuitively developed categories. Second, the researcher integrated domains and their properties. At this stage the researcher shifted from intuitive judgments about the criteria for categories and began to assign incidents to the categories. Third, the researcher delimited the theory being developed. This process involved identifying saturation areas and eliminating categories that did not apply. The researcher began to realize a "scope" to the theory being formulated (Lincoln & Guba, 1985). Finally, the researcher wrote the theory.

### Assumptions, Limitations, Delimitations

Certain assumptions, limitations, and delimitations were made that need to be acknowledged:

1. The findings from this study should not be generalized to other populations, except to the extent that the reader feels that it is possible within his or her own context.
2. The sample of participants in this study was not randomly selected.

### Summary

This chapter described the participants, data collection instruments, and the research design of this study in order to answer the major question: how elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact their acceptance of the pre-block teacher education curriculum at Montana State University. Assumptions, limitations, delimitations, and a timeframe were also presented.

## CHAPTER FOUR

### RESEARCH FINDINGS

#### Introduction

The purpose of this chapter will be to report the findings and discoveries made as a result of the data collection. This report of results will begin with a review of the statistical procedure used. Next, the data analysis will be presented. This will include the quantitative data collected from the questionnaires and survey, the data from the qualitative interviews, and a combination matrix. A discussion of meaning, a summary of results, and a chapter summary will follow the data presentation. Names in the tables have been changed to protect the participants' identities.

#### Overview of Statistical Procedure

Theoretical sampling was used to select participants. The theoretical sampling technique requires that the researcher identify and select individuals who can contribute to the evolving study (in this case, elementary education majors). After the theory is developed to the point where results become redundant, the researcher selects a more heterogeneous sample to study (e.g., grade-school students or first-year teachers). The reason the researcher moves to a heterogeneous sample is to confirm or disconfirm the conditions under which the theory holds. This method becomes a feedback loop in which

a developed theory is tested, defined, and re-constructed. It seeks to generate information on which the emergent design and grounded theory can be based (Lincoln & Guba, 1985). It also requires that the researcher use personal theoretical knowledge to make informed judgments about subgroup selection as the process unfolds. Sampling is terminated when the researcher feels that saturation of relevant categories has been achieved.

Theoretical sampling is a way of choosing participants purposefully; consequently, it fit the qualitative nature of this study. Literature and personal experience (including a pilot study) indicate that elementary education majors develop conceptions about teaching early in their educational experience. These conceptions then interfere with later learning about the teaching profession. Therefore, samples were selected from each group of education majors based on when they decided to teach, as reported on the survey. This method provided flexibility for this study to move into issues that were not anticipated (Smith & Pohland, 1969). This approach was based on existing literature on the topic and the criteria for sampling theoretically.

This study used four separate methods of data collection: (a) interviews, (b) the Stages of Concern Questionnaire, (c) Survey, and (d) the Teacher Goals Inventory. The interview was designed to discover what conceptions pre-service teachers had about teaching, when those conceptions were established, and what effect their prior conceptions have on their acceptance of the pre-block teacher education curriculum at Montana State University. It also served to triangulate information gathered from the

other data collection instruments. An interview protocol that listed the questions to ask the participants (Appendix A) was used.

The Stages of Concern Questionnaire (Appendix B) is an instrument designed to measure conceptions about teaching from the dimension of teacher concerns. It is a 45-item instrument, and it asks the participant to assign a value (from 1 = not concerned to 5 = totally preoccupied) to a specific concern.

The survey (Appendix C) was a piloted instrument based on Furlong and Maynard's (1995) findings. It consisted of five questions, demographic in nature (age, GPA, block experience, gender, and age at which the participant decided to become a teacher), and four questions designed to triangulate with the interview.

The Teacher Goals Inventory (Appendix E) is a 52-item instrument designed by Angelo and Cross (1993) to assist faculty in identifying instructional goals and matching assessment techniques to those goals. The participant is asked to rate the importance of each item on a Likert scale of 1-5. From a cumulative score, participants are then able to classify their instruction in one of six categories. The instrument was validated for this specific study because the researcher recognized differences between the original design and what this study intended to measure. After discussions with pre-service teachers, the researcher decided to isolate the last item from the other 51 and report results separately.

This study fit within the qualitative research paradigm. It used a cross-sectional, grounded theory design. There were two reasons for using a qualitative approach: (1) it fit the researcher's personal philosophy about the nature of knowledge, and (2) it was the type of research used in studies that built the framework for this study.

A cross-sectional technique was used to study more effectively past conceptions. Asking education majors to examine their memory and then to determine what those memories meant would have led to suspicious findings. The argument could be made that memories are not retained accurately for long, and that memories are susceptible to reconstruction. A cross-sectional analysis that measured the present conceptions of education majors avoided the difficulties inherent in memory recall. The grounded theory design was used because this study intended to develop a theory suggested in the literature and personal experience but not specifically researched.

### Data Analysis

By collecting demographic, quantitative, and qualitative data, the researcher intended to understand the pre-service teachers in the study. Quantitative/demographic information was gathered in twelve areas using three different validated instruments. Qualitative data was collected through interviews of approximately 45 minutes in length, including a protocol of 16 questions.

#### Quantitative/Demographic Data

Gender. The first item on the survey asked the participant to report gender. Even though the cover sheet asked for each participant's consent to participate, along with a name and phone number, the researcher realized that gender could not be determined by name

alone. As the results below show, seven males and thirty-three females participated in the study.

|     |      |       |      |     |     |     |      |      |      |      |
|-----|------|-------|------|-----|-----|-----|------|------|------|------|
|     | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
| Sex | F    | F     | M    | F   | F   | F   | M    | F    | F    | F    |

|     |     |      |      |      |      |     |      |      |      |     |
|-----|-----|------|------|------|------|-----|------|------|------|-----|
|     | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
| Sex | F   | M    | F    | F    | F    | F   | F    | F    | F    | M   |

|     |    |      |     |      |     |     |      |      |     |     |
|-----|----|------|-----|------|-----|-----|------|------|-----|-----|
|     | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
| Sex | M  | F    | F   | F    | F   | F   | M    | F    | M   | F   |

|     |     |      |      |      |     |      |      |      |      |      |
|-----|-----|------|------|------|-----|------|------|------|------|------|
|     | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva | Jill | Cass |
| Sex | F   | F    | F    | F    | F   | F    | F    | F    | F    | F    |

GPA. Another question on the survey asked the participants to report their grade point averages. Six refused to do so. It is not known how their refusal might reflect on the other data collected. The researcher decided to theoretically sample these participants regardless of their refusal because GPA was not as integral to the study as their conceptions about teaching and when they reported deciding to teach. The researcher was unable to discern any connection between GPA and other findings.

|     |      |       |      |     |     |     |      |      |      |      |
|-----|------|-------|------|-----|-----|-----|------|------|------|------|
|     | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
| GPA | 3.5  | 3.8   | 3.5  |     |     | 2.8 | 3.0  |      | 3.8  | 3.6  |

|     |     |      |      |      |      |     |      |      |      |     |
|-----|-----|------|------|------|------|-----|------|------|------|-----|
|     | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
| GPA | 3.2 | 3.2  | 3.9  | 3.5  | 3.5  | 2.8 | 3.2  | 3.5  | 3.8  | 2.8 |

|     |    |      |     |      |     |     |      |      |     |     |
|-----|----|------|-----|------|-----|-----|------|------|-----|-----|
|     | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
| GPA |    | 3.7  | 3.0 |      |     | 3.5 | 3.8  | 3.0  | 2.6 | 3.0 |

|     |     |      |      |      |     |      |      |      |      |      |
|-----|-----|------|------|------|-----|------|------|------|------|------|
|     | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva | Jill | Cass |
| GPA | 3.0 | 2.8  | 3.0  | 3.7  | 3.6 | 3.5  | 3.2  | 3.0  | 3.2  | 3.5  |

Age. The researcher wanted to record the age of each participant. Psychosocial theory, which examines adult development in relation to age, could provide explanations for certain findings. After the data was analyzed, age proved unrelated to attitudes and conceptions (Mean age = 21.75).

|     |      |       |      |     |     |     |      |      |      |      |
|-----|------|-------|------|-----|-----|-----|------|------|------|------|
|     | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
| Age | 18   | 18    | 18   | 18  | 25  | 36  | 18   | 19   | 18   | 17   |

|     |     |      |      |      |      |     |      |      |      |     |
|-----|-----|------|------|------|------|-----|------|------|------|-----|
|     | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
| Age | 18  | 18   | 18   | 18   | 18   | 18  | 19   | 18   | 18   | 19  |

|     |    |      |     |      |     |     |      |      |     |     |
|-----|----|------|-----|------|-----|-----|------|------|-----|-----|
|     | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
| Age | 21 | 21   | 22  | 32   | 21  | 22  | 24   | 40   | 24  | 22  |

|     |     |      |      |      |     |      |      |      |      |      |
|-----|-----|------|------|------|-----|------|------|------|------|------|
|     | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva | Jill | Cass |
| Age | 22  | 22   | 21   | 21   | 22  | 40   | 22   | 21   | 21   | 22   |

Age at Decision. "Age at Decision" is the age at which the participants reported deciding to become a teacher. During the pilot study, individuals who reported making this decision after high school tended to have less affective profiles than those who decided early in life. At first the researcher was unable to see any impact the age at decision played on overall attitudes and conceptions. However, upon closer observation, an interesting trend emerged. Those participants who reported, both on the survey and in the interview, having decided to teach after K-12 and who reported developing conceptions about teaching after K-12 were more accepting of what professors had to say and to the curriculum in general. Those who did not meet all three conditions were less accepting. It seems that pre-service teachers arrive at college with varying degrees of conceptions developed while they themselves were students. Those who traced all conceptions of

teaching to post-K-12 experiences were more accepting of the pre-block teacher education curriculum at Montana State University.

|             | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
|-------------|------|-------|------|-----|-----|-----|------|------|------|------|
| Age at dscn | 8    | 10    | 17   | 11  | 25  | 6   | 18   | 5    | 6    | 17   |

|             | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
|-------------|-----|------|------|------|------|-----|------|------|------|-----|
| Age at dscn | 5   | 17   | 6    | 17   | 17   | 6   | 17   | 15   | 10   | 18  |

|             | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
|-------------|----|------|-----|------|-----|-----|------|------|-----|-----|
| Age at dscn | 3  | 4    | 20  | 24   | 12  | 8   | 22   | 19   | 20  | 5   |

|             | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva | Jill | Cass |
|-------------|-----|------|------|------|-----|------|------|------|------|------|
| Age at dscn | 18  | 19   | 19   | 18   | 4   | 5    | 20   | 5    | 19   | 19   |

Freshman vs. Junior. The researcher wanted to differentiate those who were just beginning the college experience at Montana State University from those who had completed core coursework and had been accepted into the teacher preparation program. The researcher found that conceptions and attitudes were not dramatically different between the two groups.

[illegible][illegible][illegible][illegible]

Grade Preferred. During the pilot study, the researcher noticed a slight tendency on the part of those who had decided early to be teachers to favor teaching earlier grades. This possible trend was not evident in the final data analysis of this study.

|               | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
|---------------|------|-------|------|-----|-----|-----|------|------|------|------|
| Grade<br>pref | 2-4  | K-2   | K    | K-1 | K-2 | K-5 | 2-5  | K-2  | 3-5  | K-2  |

|               | Meg | Nick  | Mary | Dora | Edna | Ena | Fifi | Gale | Hana  | Jay |
|---------------|-----|-------|------|------|------|-----|------|------|-------|-----|
| Grade<br>pref | ALL | 2,7-8 | K-2  | 3    | 6-8  | 1-3 | ANY  | K-2  | 2,4-5 | K,8 |

|               | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
|---------------|----|------|-----|------|-----|-----|------|------|-----|-----|
| Grade<br>pref | 3  | 2-3  | 1-3 | K-1  | 8   | 2-5 | 6-8  | K-3  | 3-5 | 2-4 |

|               | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva | Jill | Cass |
|---------------|-----|------|------|------|-----|------|------|------|------|------|
| Grade<br>pref | 2-3 | 1,3  | 2-3  | 4-8  | K-3 | 1-3  | none | 2-8  | K-1  | 3-5  |

Definition of Effective. During the pilot study, the researcher was intrigued to discover that when asked to define an “effective teacher,” most participants gave responses involving the affective domain. Very few of the responses involved reference to the cognitive domain. The following table reflects the number of references each participant made to knowledge when asked to define “effective.” Of the 200 total responses to the question, 12 involved anything to do with knowledge.

|                     | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
|---------------------|------|-------|------|-----|-----|-----|------|------|------|------|
| Def. of<br>effectiv | 0    | 0     | 0    | 0   | 0   | 0   | 1    | 0    | 0    | 0    |

|                     | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
|---------------------|-----|------|------|------|------|-----|------|------|------|-----|
| Def. of<br>effectiv | 0   | 1    | 0    | 0    | 0    | 0   | 1    | 0    | 0    | 0   |

|                     | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
|---------------------|----|------|-----|------|-----|-----|------|------|-----|-----|
| Def. of<br>effectiv | 0  | 1    | 1   | 0    | 0   | 1   | 0    | 0    | 0   | 1   |

|                     | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva | Jill | Cass |
|---------------------|-----|------|------|------|-----|------|------|------|------|------|
| Def. of<br>effectiv | 0   | 1    | 1    | 0    | 0   | 0    | 1    | 1    | 0    | 1    |

Coursework vs. Practical Experience. Literature suggests that pre-service teachers do not see course work as relevant to their development as teachers. Most feel that practical classroom experience is the most important feature of teacher education programs. The researcher wanted to investigate this further. Data analysis supports the contention that coursework is seldom seen as the strongest component of teacher education programs. Only six participants felt that coursework (C) was the most important. While most did see course work as contributing to their education (E), many (14) considered only the practical experience (P) to be necessary.

|                    |      |       |      |     |     |     |      |      |      |      |
|--------------------|------|-------|------|-----|-----|-----|------|------|------|------|
|                    | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
| Cswk vs. practical | E    | E     | C    | P   | E   | E   | E    | C    | E    | P    |

|                    |     |      |      |      |      |     |      |      |      |     |
|--------------------|-----|------|------|------|------|-----|------|------|------|-----|
|                    | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
| Cswk vs. practical | E   | E    | E    | P    | C    | E   | C    | P    | C    | P   |

|                    |    |      |     |      |     |     |      |      |     |     |
|--------------------|----|------|-----|------|-----|-----|------|------|-----|-----|
|                    | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
| Cswk vs. practical | P  | E    | P   | E    | P   | E   | P    | E    | E   | E   |

|                    |     |      |      |      |     |      |      |      |      |      |
|--------------------|-----|------|------|------|-----|------|------|------|------|------|
|                    | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva | Jill | Cass |
| Cswk vs. practical | P   | P    | E    | P    | E   | E    | E    | P    | C    | P    |

Confidence in Skills. Pre-service teachers exhibit high levels of confidence in their teaching skills. This confidence is seen in the data analysis. Most feel that they already possess an average of 60% of the skills needed to teach. Those who had never taken a

single college class reported knowing nearly two-thirds of the skills necessary to be a teacher.

|             | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
|-------------|------|-------|------|-----|-----|-----|------|------|------|------|
| %<br>skills | 90   | 70    | 40   | 30  | 70  | 60  | 60   | 50   | 80   | 50   |

|             | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
|-------------|-----|------|------|------|------|-----|------|------|------|-----|
| %<br>skills | 60  | 50   | 40   | 50   | 80   | 50  | 40   | 60   | 50   | 60  |

|             | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
|-------------|----|------|-----|------|-----|-----|------|------|-----|-----|
| %<br>skills | 70 | 70   | 70  | 70   | 70  | 80  | 80   | 70   | 70  | 70  |

|             | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva             | Jill | Cass |
|-------------|-----|------|------|------|-----|------|------|------------------|------|------|
| %<br>skills | 60  | 80   | 50   | 60   | 70  | 30   | 60   | None<br>reported | 30   | 60   |

SCQ. The Stages of Concern Questionnaire was used to place participants within a profile established by Fuller (1975), described earlier in this study. Freshmen in the study scored higher in the "impact" stage than did the juniors. It is unclear if this is due to the freshmen being concerned with the emotional and learning needs of pupils, or if it was

due to these freshmen being in the first stage of growth labeled by Fuller (1975). In this stage, pre-service teachers have not yet disconnected from seeing themselves as students.

( "I" = impact stage, "T" = Task stage )

|     |      |       |      |     |     |     |      |      |      |      |
|-----|------|-------|------|-----|-----|-----|------|------|------|------|
|     | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
| SCQ | I    | T     | I    | I   | I   | T   | I    | T    | I    | I    |

|     |     |      |      |      |      |     |      |      |      |     |
|-----|-----|------|------|------|------|-----|------|------|------|-----|
|     | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
| SCQ | I   | I    | I    | I    | T    | I   | I    | I    | I    | I   |

|     |    |      |     |      |     |     |      |      |     |     |
|-----|----|------|-----|------|-----|-----|------|------|-----|-----|
|     | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
| SCQ | I  | I    | I   | I    | T   | I   | T    | I    | I   | I   |

|     |     |      |      |      |     |      |      |      |      |      |
|-----|-----|------|------|------|-----|------|------|------|------|------|
|     | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva | Jill | Cass |
| SCQ | S   | T    | I    | I    | S   | I    | I    | S    | I    | T    |

TGI. The Teaching Goals Inventory (TGI) is designed to help participants realize the focus of their goals while teaching. It is broken into six categories:

- I. Higher-order thinking skills
- II. Basic academic success skills
- III. Discipline specific knowledge and skills

IV. Liberal arts and academic values

V. Work and career preparation

VI. Personal development

None of the freshmen felt that the focus of teaching should be higher-order thinking skills. Only one felt that the focus should be discipline-specific knowledge. Most of the participants felt that the focus should be work and career preparation, personal development, and liberal arts. The junior level participants did not differ noticeably from the freshman in their beliefs.

|     |      |       |      |     |     |     |      |      |      |      |
|-----|------|-------|------|-----|-----|-----|------|------|------|------|
|     | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
| TGI | VI   | IV    | II   | V   | II  | II  | IV   | VI   | VI   | III  |

|     |     |      |      |      |      |     |      |      |      |     |
|-----|-----|------|------|------|------|-----|------|------|------|-----|
|     | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
| TGI | VI  | II   | VI   | VI   | IV   | V   | II   | I-VI | V    | IV  |

|     |    |      |     |      |     |     |      |      |     |     |
|-----|----|------|-----|------|-----|-----|------|------|-----|-----|
|     | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
| TGI | II | II   | VI  | I    | IV  | V   | VI   | I    | V   | VI  |

|     |     |      |      |      |      |      |      |      |      |      |
|-----|-----|------|------|------|------|------|------|------|------|------|
|     | Kim | Deva | Lucy | Jane | Peg  | Pati | Nora | Deva | Jill | Cass |
| TGI | V   | VI   | VI   | II   | I-VI | VI   | VI   | II   | VI   | II   |

Primary Role of Teachers (TGI). In this study the researcher validated the TGI using focus group interviews comprised of pre-service teachers. The focus group determined that the final question on the TGI should be separate from the rest of the instrument. The focus group cited two reasons: (1) The instrument could be more easily scored by separating the last question. (2) Because of the way the instrument was being used, the focus group felt that the last question was a summative question that should not be grouped with the previous 51 items. The researcher and auditor concurred with the focus group. The final item asked participants to decide which of six categories best represented their view of the primary role of a teacher.

1. Teaching students facts and principles of the subject matter
2. Providing a role model for students
3. Helping students develop higher-order thinking skills
4. Preparing students for jobs and careers
5. Fostering student development and personal growth
6. Helping students develop basic learning skills

The results supported the findings from the rest of the TGI. Most of the participants felt that a teacher should be more concerned with preparing students for careers, fostering personal growth, and developing general learning skills. Only one felt that teaching the facts and principles of a subject should be a teacher's primary role.

|                          | Mary | Betty | Cody | Amy | Ann | Kay | Zeke | Cher | Cari | Cass |
|--------------------------|------|-------|------|-----|-----|-----|------|------|------|------|
| Primary role of teachers | 6    | 3     | 2    | 5   | 2   | 5   | 5    | 5    | 2    | 5    |

|                          |     |      |      |      |      |     |      |      |      |     |
|--------------------------|-----|------|------|------|------|-----|------|------|------|-----|
|                          | Meg | Nick | Mary | Dora | Edna | Ena | Fifi | Gale | Hana | Jay |
| Primary role of teachers | 5   | 1    | 5    | 5    | 4    | 6   | 5    | 2    | 6    | 5   |

|                          |    |      |     |      |     |     |      |      |     |     |
|--------------------------|----|------|-----|------|-----|-----|------|------|-----|-----|
|                          | Ed | Irma | Kim | Jade | Sue | Uma | Todd | Jean | Tom | Joy |
| Primary role of teachers | 5  | 5    | 2   | 5    | 2   | 3   | 5    | 3    | 3   | 5   |

|                          |     |      |      |      |     |      |      |      |      |      |
|--------------------------|-----|------|------|------|-----|------|------|------|------|------|
|                          | Kim | Deva | Lucy | Jane | Peg | Pati | Nora | Deva | Jill | Cass |
| Primary role of teachers | 5   | 5    | 5    | 6    | 2   | 5    | 5    | 6    | 5    | 3    |

### Qualitative Data

This section will display the themes, codes, and code meaning for each of the sixteen interview questions. Discussion of findings for each question is also included.

Question 1. When did you decide to become a teacher?

| CODE | CODE MEANING AND # OF RESPONSES                 | THEME  |
|------|-------------------------------------------------|--------|
| AL   | Always wanted to be a teacher (3)               | During |
| FS   | First grade (3)                                 | During |
| FT   | Fifth grade (2)                                 | During |
| AG   | Really young, and then again in high school (3) | During |
| MS   | Middle school (3)                               | During |

|    |                                             |        |
|----|---------------------------------------------|--------|
| SX | Sixteen years old (1)                       | During |
| HJ | Junior in high school (4)                   | During |
| PT | Very young, mom and/or dad are teachers (3) | During |
| SO | Sophomore year in college (5)               | After  |
| TR | Transfer from another major in college (6)  | After  |
| SD | Still deciding (1)                          | After  |
| NT | After own child was born (1)                | After  |
| FH | Freshman year in college (1)                | After  |
| HS | Eighteen years old (5)                      | After  |

The themes of “during” and “after” resulted from questions posed by other researchers and from findings made during the pilot study. The pilot study identified emerging trends that appeared to link certain conceptions and beliefs about teaching to when the participants decided to become teachers. Those who decided to become teachers while still in grade school or early high school (“during”) seemed to have a more affective approach to teaching than those who decided while in college (“after”). In this study, the researcher attempted to improve understanding about how early decisions might impact a pre-service teacher’s conceptions about teaching. The researcher built upon questions originally posed by Lortie (1975).

It is not easy to visualize an eight- or ten-year-old child engaging in an informed search of all occupational alternatives and rationally weighing relative costs and benefits before making a choice. The image strains imagination; even the presumption of information, much less the capacity to evaluate, violates what we know about children. Confronted by early occupational decisions, therefore, it makes sense to use models which do not assume pure rationality. What emotional experiences attract children to [teaching] and solder them to an early commitment? This area needs more research. (p. 42)

Four relevant findings emerged upon analysis of the data. The first was that many of the pre-service teachers had decided on teaching as a career very early in life. Joy, a junior, voiced a recurring theme:

I always knew when I was in school – like elementary school growing up – and saw my teacher; I was like I want to do that. (#32, p.1)

Ena was even more adamant:

I have always liked the way teachers teach. I have always wanted to teach little kids. I have always wanted to be a teacher. I love little kids. (#6, p. 1)

Several students reported deciding to teach after high school, but they also reported early commitments to the profession. Uma expressed it this way:

I made my decision after two years into college. The first time I decided to become a teacher was in third grade. (#11, p. 1)

Some pre-service teachers seemed unable to completely commit to teaching because they viewed it as an unchallenging profession. This may have contributed to Uma's later decision. She went on to say that:

When I came to college, I had this notion that I should challenge myself more so I didn't want to go into elementary education because I didn't think it would challenge me enough. (# 22, p. 2)

Ed echoed this sentiment; but in his case, the lack of challenge may have led him to his decision. He stated:

When I was deciding, teaching didn't seem like work to me. (#16, p. 1)

Zeke agreed:

I want to be an elementary teacher and so I won't be teaching anything on a high level. You are just teaching them basic things and so I think I will enjoy it. (#7, p. 1)

Those who made early decisions did not always choose teaching exclusively. Cari is not yet certain that she wants to make teaching her profession. She is also contemplating becoming a nurse. It is interesting to the researcher that she “played” or acted out as a child the two professions she is considering. She stated:

Well, the thing is, I am going between being a teacher and nursing. I have always wanted to be a teacher and a nurse. I am kind of going back and forth. I probably decided in elementary school. I would go with my girlfriends and we would play teachers. [Interviewer: Did you play nurse too?] Yeah. We would play doctors and use my little sisters. (#27, p. 1)

Several others reported “playing” teacher while they were children. Irma described her early playacting:

My brother, who is two years younger than me – we had friends that were the same age, both girls – they would come over and we would spend three nights together because we lived a ways away. We would sit there for days and turn the whole bedroom into a school with mattresses and chairs and books and everything. I usually got to be the teacher. (# 2, p. 1)

Question 2. What do you anticipate teaching to be like?

| CODE | CODE MEANING AND # OF RESPONSES              | THEME       |
|------|----------------------------------------------|-------------|
| HP   | Happy time (1)                               | Enjoyable   |
| GE   | Good experience (2)                          | Enjoyable   |
| FN   | Fun (5)                                      | Enjoyable   |
| EJ   | Enjoyable (3)                                | Enjoyable   |
| RW   | Rewarding (2)                                | Rewarding   |
| SH   | Stressful and hard work (1)                  | Challenging |
| DO   | Will require dedication and organization (3) | Challenging |

|    |                                          |             |
|----|------------------------------------------|-------------|
| HC | Hectic and crazy (1)                     | Challenging |
| HW | Hard, will take lots of work (3)         | Challenging |
| HF | Hard and joyful (2)                      | Dichotomous |
| FC | Fun and challenging (5)                  | Dichotomous |
| GB | Good days and bad days (1)               | Dichotomous |
| FD | Fun but discipline will be difficult (2) | Dichotomous |
| WF | Hard work but fulfilling (4)             | Dichotomous |
| CR | Challenging and rewarding (4)            | Dichotomous |
| SR | Stressful and rewarding (1)              | Dichotomous |

Four main themes emerged from the data. The pre-service teachers interviewed anticipated teaching to be either enjoyable, rewarding, challenging, or some combination of positive and negative at the same time (dichotomous).

When pre-service teachers were asked, they seemed to be pretty sure about what teaching will be like. Pati explained it this way:

I have already had one of my paras and so I have been in a first-grade classroom. It was very much what I was thinking it would be like. If I was in a first grade it would be like all the first-grade teachers coming in and working together to build on a curriculum to come up with lesson plans together. I can see it, but just don't know how to say it. I can see myself enjoying it and the kids and that kind of thing. (#19, p. 3)

Like Pati, most of the other pre-service teachers had strong conceptions about teaching even though their experience *as teachers* was very limited. These ideas tended to be simplistic and affective. Mary believes that because children are "fun," the job will be also.

I think it will be fun, I really do. I am really excited about it. I think it will be a lot of fun, a lot of high energy – I think not only working with the kids, but the parents too. (#10, p. 1)

Many of the pre-service teachers the researcher talked with reiterated the ideas

Mary had of teaching being fun and enjoyable. Cass exclaimed:

Just fun! I want to change people and see little kids learning and going from one grade to the next with more knowledge. (#25, p. 1)

Several invoked a common cliché in the teaching profession, the “light bulb.” Kim explained it this way:

I am excited about it. I totally know that this is what I want to do and stuff. There is going to be a lot of rewards seeing kids read and seeing that light bulb come on for the first time. (# 15, p. 1)

Betty expressed similar feelings:

...it is just fun to see their faces light up when they get it. (#3, p.1)

Question 3. When did you first develop your conceptions about teaching?

| CODE | CODE MEANING AND # OF RESPONSES                                                 | THEME      |
|------|---------------------------------------------------------------------------------|------------|
| ES   | Ever since I have been in school (1)                                            | Continuous |
| RC   | Realistic ones in college, before I had conceptions only as a student (2)       | Continuous |
| SP   | Not sure, it has been a slow process (2)                                        | Continuous |
| IK   | I knew how it would be because you go to school and see the teachers (1)        | Continuous |
| UA   | Developed them all along the way through school (4)                             | Continuous |
| CR   | All my life I have been curious about teaching and have watched teachers<br>(1) | Continuous |
| TR   | Throughout, from about second grade up until college (1)                        | Continuous |

|    |                                                |            |
|----|------------------------------------------------|------------|
| HS | High school (7)                                | During     |
| SH | Sophomore in high school (1)                   | During     |
| TH | Third grade (2)                                | During     |
| SX | Since day care or head start, six or seven (1) | During     |
| FG | First grade (2)                                | During     |
| MS | Middle school (2)                              | During     |
| SG | Second grade (1)                               | During     |
| CO | College (5)                                    | After      |
| DC | While working in day care (1)                  | Experience |
| AC | After my first child was born (1)              | Experience |
| DK | Don't know (4)                                 | Don't know |
| CH | My conceptions have changed (1)                | Change     |

Based on the pilot study, the researcher decided to use the major themes “during” and “after” to match the themes from question number one. However, as the researcher analyzed the data, it became clear that those two themes were too limiting to encompass what the pre-service teachers were saying. Some reported that their conceptions evolved over a period of time (continuous). Others reported developing conceptions about teaching after the birth of a child or some other life experience. Some also reported a change in the conceptions held at different times. The researcher suspected that any of these themes could possibly interact with other data and, therefore, chose to “de-limit” the original two themes. It is interesting to note that most participants reported developing conceptions of “teaching” during their K-12 experiences. Some, like Cher, reported developing conceptions early in grade school.

Probably not until I was at least first or second grade when my goal became more developed. (# 20, p. 1)

Others reported developing conceptions early and then refining their images of “teacher” throughout their childhood. Zeke and Joy are two examples:

Ever since I have been a student and getting to know the teachers and stuff – ever since I have been in school. (#7, p. 1)

I guess all my life I have been curious about the teaching profession and watched teachers and their habits. (# 32, p. 2)

Several reported deciding to be a teacher after high school but had developed conceptions about the profession earlier. Nora described her decision this way:

My final decision was made a couple of years ago. I always knew I liked kids, but for some reason never really thought seriously about it as a major. I guess my mom kind of brought it up saying I would be a good teacher. (# 5, p. 1)

Question 4. What inspired you to become a teacher?

| CODE | CODE MEANING AND # OF RESPONSES              | THEME |
|------|----------------------------------------------|-------|
| OK   | Own kid (1)                                  | Kids  |
| CB   | Combination of love of kids and teachers (2) | Kids  |
| RK   | Kids (2)                                     | Kids  |
| HC   | Happiest when around children (1)            | Kids  |
| KW   | Working with kids (5)                        | Kids  |
| CC   | I feel I communicate well with children (1)  | Kids  |
| LK   | I love kids (2)                              | Kids  |
| DH   | Desire to help other people’s children (1)   | Kids  |
| MD   | Making a difference in a kid’s life (1)      | Kids  |

|    |                                                  |             |
|----|--------------------------------------------------|-------------|
| CM | Working with children and meeting new people (1) | Kids        |
| MT | Mom was a teacher (5)                            | Sig. Others |
| OP | Other people (1)                                 | Sig. Others |
| NS | Nothing – not sure I want to be a teacher (1)    | Don't Know  |
| DK | Don't know – it was just there (1)               | Don't know  |
| WR | While working in a daycare center (1)            | Experience  |
| PT | Past teachers (9)                                | Teachers    |
| BT | Bad teachers who were not good to kids (5)       | Rescue      |

Complex personal and social dynamics attract individuals to the teaching profession. In his work, Lortie (1975) identified nine such attractants. Six of these can be considered desirable, and three can be considered less than desirable.

The first desirable attractant to teaching is the interpersonal theme. Pre-service teachers cite a love of children and the desire to work with young people. They see a need to model for their students correct social and personal behavior. The second desirable attractant is that some see teaching as a valuable service to society. They feel that as teachers they will be identified among those who give of themselves to help others succeed. The third attractant is a personal attachment to the school setting. Pre-service teachers who were attracted to teaching for this reason often declare a love for school. They see school as a safe place, where they excelled. The fourth attractor is material benefits. Some pre-service teachers are attracted because of the prestige and job security of being a teacher. They view teaching as the best career alternative compared to the other possibilities open to them. The fifth attractor is the perceived work schedule of

being a teacher. Individuals attracted for this reason are drawn by the promise of summers off and set work times. The final desirable attractor is having parents who were teachers.

Individuals are attracted to teaching for negative reasons as well. The first negative attractor to teaching is a desire to resolve acute identity issues. Kronus (1969) found that people who entered the profession for this reason were frequently (a) the daughters of foreign-born parents or (b) the children of mothers who worked in lower-class occupations (p. 88). Another undesirable attractor is labeling by significant others. This negative attractor also revolves around identity issues in the pre-service teacher and manifests itself when others observe particular abilities in a person and attach meaning to them – e.g., “Kids really like you; have you ever thought about being a teacher?” The third undesirable attractor to teaching is constraint. Pre-service teachers may feel constrained to enter the profession because of socioeconomic realities, the wishes of their parents, or blocked aspirations in other professions.

These “attractors” served as the initial themes for this study. Several of them were represented in the findings. The interpersonal theme was especially strong. Kay explained her attraction to teaching this way:

I have to say just being the happiest around children. That is what I recharge from and that is what I feel comfortable with and that is what I feel the happiest and relaxed with. (# 9, p. 3)

Many other participants also spoke in terms of their love for children and the happiness they found working with young people. Jane described her feelings this way:

I really like working with kids and I wanted to do something with my life that wouldn't be the same everyday and interact with people and do a variety of

subject matters and stuff like that. It just seemed like the right fit for me. (# 12, p. 2)

Some enter the profession due to the influence of parents who are teachers. Kim was one of these:

My mom loves it and I really like kids and enjoy being around kids. It is a rewarding job. It is definitely a type of person you have to be, a giving caring person – I feel like I am that. I just kind of woke up one day – had always thought about it, but it just kind of played into the key that that was what I wanted to do. (# 15, p. 1)

Others were attracted to the profession because of other significant people in their lives. Todd was one of these:

...I guess people, my wife helped me make the decision – my parents and other people I knew, people in the school systems really wanted to get me into education. (#28, p. 2)

Lortie (1975) did not make a direct connection between past experiences with teachers and his decision to teach, even though he did allude to past “love” for the school experience. However, this researcher was able to discern that some participants were drawn to teaching because of past experiences with teachers during their own K-12 education. Mary is an example, she explained:

I think my own teachers. They inspired me. They had fun doing it. It looked like it was a lot of fun and interesting when they did it. Also, my personal experience, my own playing with it and going into it and stuff. (# 10, p. 2)

Some of the participants’ past experiences were quite influential, even though these experiences were limited. Hana remembered deciding to teach in second grade:

Just one teacher back in second grade, I don’t know why. She used to have this wand and I thought that was the coolest thing. She pretty much inspired me. (# 33, p. 1)

Edna also recalled past teachers as her inspiration to teach:

Having a lot of great teachers. I went to a really small school and everyone is really close. Everyone knows everybody – just seeing that small school atmosphere and the way teachers worked together and all that I really liked. (#2, p. 2)

Some had strong negative feelings about their K-12 experiences that influenced them to become teachers. Fifi was one who had such feelings:

I grew up in a big school district – watching the kids that aren't as smart get left behind while the teachers can't help all the kids. At that point, I realized that I want to go in there and be the teacher that they can learn like everyone else and not be left behind. When I moved into the smaller school, I realized that is what I need to do, to help everyone feel like they are needed in school and not be left behind. I was one of the ones that were left behind. (# 36, p. 2)

Question 5(a). Was there a teacher who inspired you to become a teacher?

| CODE | CODE MEANING AND # OF RESPONSES          | THEME |
|------|------------------------------------------|-------|
| NO   | There was no teacher who inspired me (9) | No    |
| YS   | There was a teacher who inspired me (31) | Yes   |

5(b). If yes, what was he/she like?

| CODE | CODE MEANING AND # OF RESPONSES                                     | THEME  |
|------|---------------------------------------------------------------------|--------|
| AT   | Always there, friendly and open (2)                                 | Friend |
| IA   | Involved, not afraid to give you a hug (2)                          | Friend |
| CR   | Caring (5)                                                          | Friend |
| RC   | They just really cared. They were a friend as well as a teacher (1) | Friend |
| BH   | Has a big heart for kids (1)                                        | Friend |
| RN   | Was really nice, his incentives were really neat (1)                | Friend |
| FC   | Felt comfortable in his class (2)                                   | Friend |

|    |                                                            |           |
|----|------------------------------------------------------------|-----------|
| LF | Made learning fun (8)                                      | Enjoyment |
| EG | Easy going, got everyone interested (2)                    | Enjoyment |
| GS | Gave me structure to help me learn how to teach myself (1) | Success   |
| PM | Pushed me to do the work to succeed (3)                    | Success   |
| TR | Treated you with respect (1)                               | Respect   |
| DC | Didn't totally command the class (1)                       | Respect   |
| DT | Didn't treat me like I was stupid (1)                      | Respect   |

Many of the participants remembered teachers who influenced their decision to become teachers. Their aspirations about the kind of teacher they want to become are heavily influenced by their recollections of teachers from their past. Cari remembered one junior high teacher this way:

I had some really good teachers and I wanted to be like them. Todd Rose, he is the history teacher and he didn't go from the book and he did more hands-on stuff and made it fun and we learned a lot. (# 27, p. 1)

When she was asked what "made it fun," she responded:

He would tell stories that would go with what we were doing and they got really into it and that was the biggest thing, was to make sure that we learned the information. ( p. 1)

Later, when she was asked about her vision for the type of teacher she wanted to be, Cari replied:

That I let them have fun, but they also had to learn the material. (p. 3)

Gale had this to say about past teachers:

They made learning fun. I had teachers who made learning strict, by the book, and it just wasn't something that I wanted to do, and I got into classes with teachers who made things that would normally be difficult to learn into something fun. (# 23, p. 2)

When she was asked what type of teacher she wanted to be, she replied:

I want to be a fun teacher. One of those teachers that most kids feel they can somehow relate or talk to (p. 2).

Participants who did not remember past teachers were less oriented to student fun and enjoyment and were more accepting of the pre-block teacher education curriculum at Montana State University. Jade is one example. Asked when she developed her conceptions about teaching, she responded:

Well, the first – when I first started having any kind of thinking about teaching was not when my kids went to school, but when I was in Dr. Carson's class, when we were learning about the political side of teaching. That is when I started to get my own perceptions of the teaching profession. I had a lot of questions, things that really bothered me, things I had never thought about before, and so that is when I started gaining my own perceptions as far as what teaching is all about. (# 4, p. 2)

Later, when she was asked if there was a teacher who influenced her, she replied:

Nope. Um, I can only remember one of my teachers and that was when I was in fourth grade...a lot of it back then was memorization and she wasn't like that – other than her I don't even remember any of my teachers. (# 4, p. 4)

Question 6. What kind of teacher do you want to be?

| CODE | CODE MEANING AND # OF RESPONSES                 | THEME     |
|------|-------------------------------------------------|-----------|
| FN   | Fun and nice, I want students to learn also (3) | Enjoyment |
| LF   | Make learning fun (4)                           | Enjoyment |
| AE   | Active, enthusiastic, and a little pushy (1)    | Enjoyment |
| EF   | Exciting, make learning fun (2)                 | Enjoyment |
| KI   | Get kids interested in learning (1)             | Enjoyment |

|    |                                                                           |         |
|----|---------------------------------------------------------------------------|---------|
| ES | Effective, provide structure, help build knowledge (2)                    | Success |
| TI | Help kids become thinking individuals (2)                                 | Success |
| TT | One who teaches them what I am trying to teach (1)                        | Success |
| LI | Creative, looks at everyone as individuals (1)                            | Success |
| GA | One who gets along with everybody (1)                                     | Friend  |
| PT | A positive teacher who is on the kids' level (3)                          | Friend  |
| BK | To be somebody who believes in those kids, be there (3)                   | Friend  |
| CR | Caring (3)                                                                | Friend  |
| LM | For the kids to like me, get along with me and have fun (5)               | Friend  |
| LA | To learn along with the students, personable (1)                          | Friend  |
| KR | Somebody who treats kids with respect (1)                                 | Respect |
| CP | Make students comfortable and not run to the principal for discipline (1) | Respect |
| FD | Fun but a disciplinarian (2)                                              | Respect |
| AR | Approachable, respected yet still in control (1)                          | Respect |
| LU | One the kids look up to and will remember (2)                             | Mentor  |

Most of the participants wanted to develop into a teacher who they defined as fun, exciting, caring, kind, helpful, and who is seen favorably regarded by pupils. Kim summed up the feelings of many of her peers:

A good teacher. I want to be a teacher that is fun and isn't like, this is how we are going to do it. I want to be able to get my point across and enjoy the environment and have the kids enjoy the environment and not hate coming to school. I want learning to be fun. I want them to be learning and not even know they are learning. I guess a lot of hands-on. I don't want to be the kind of teacher where I am the teacher and you're the student – I don't want it to be a great big level. I want them to feel like they can raise their hand in class and give an answer and not feel like I am going to yell at them because they said the wrong one. I want it so they feel comfortable. When I learn best - I don't want to be intimidating. I want to be a teacher that is at their level. (#15, p. 3)

Several of the participants mentioned the word "respect." While the researcher did code some of the responses under the theme "respect," these participants also spoke of wanting to be their pupils' friend or to provide a fun or enjoyable learning environment -- while at the same time maintaining their pupils' respect. Cass provides one example of this struggle to strike an appropriate balance.

I am still trying to figure that out because I think I have this idea that you can't be in control and still be that loving confidant for the students. I am trying to find that middle ground in between them. I want to be approachable and respected. (#24, p. 5)

A few participants were more concerned with teaching the material. Tom described the kind of teacher he wants to be as:

Hopefully one that works and doesn't -- actually, that is the biggest fear, is not actually teaching the kids. I want them to learn what I am trying to teach them and stuff. (#26, p. 2)

Question 7. What part of teaching do you find the most attractive?

| CODE | CODE MEANING AND # OF RESPONSES                                   | THEME         |
|------|-------------------------------------------------------------------|---------------|
| BC   | Being with the children (4)                                       | Interpersonal |
| LU   | Satisfaction of seeing kids faces "light up" when they learn (5)  | Interpersonal |
| TC   | Teaching kids in a creative way (1)                               | Interpersonal |
| IK   | Interaction with kids (6)                                         | Interpersonal |
| GT   | Those moments when you have really gotten through to a child (1)  | Interpersonal |
| SK   | Spending every single day with the same group of children (1)     | Interpersonal |
| SD   | Actually sitting down with kids and teaching them how to read (2) | Interpersonal |
| HI   | Fulfillment of having impact on kids (3)                          | Interpersonal |

|    |                                                                         |               |
|----|-------------------------------------------------------------------------|---------------|
| CE | Being with kids and conveying that excitement about some subject (1)    | Interpersonal |
| RM | Being a role model (3)                                                  | Interpersonal |
| TO | Teaching others what you know and helping them learn what they need (1) | Interpersonal |
| NK | Meeting new kids and others (2)                                         | Interpersonal |
| KC | Keeping control of class while still making it fun (1)                  | Challenge     |
| CH | The challenge (1)                                                       | Challenge     |
| WS | Seeing which teaching styles work best (2)                              | Challenge     |
| SE | Special education and kids with special needs (1)                       | Service       |
| HK | Helping kids achieve their goals (4)                                    | Service       |
| SO | Summers off (1)                                                         | Schedule      |

The themes identified from responses to this question evolved from Lortie's attractors of "interpersonal," "service," and "schedule." One other theme was added in this study that was not foreseen by Lortie: "challenge." While most of the participants cited children as the main attraction to teaching, several others cited the challenge. Todd was one of the latter:

Being a challenge – a challenge of reaching every student, of being creative. A challenge of curriculum, putting everything together – just mostly challenging. (# 28, p. 4)

The cliché of "watching the children's eyes light up" was repeated several times.

Cass responded:

Probably when they get something they haven't got in a while and you can just see them light up and say, I get it now. (# 25, p. 3)

Question 8. What kind of relationship do you want to have with students in your class?

| CODE | CODE MEANING AND # OF RESPONSES                                              | THEME   |
|------|------------------------------------------------------------------------------|---------|
| PR   | Personal relationship (4)                                                    | Friend  |
| WC   | Whatever the children want (1)                                               | Friend  |
| FR   | A friendly relationship (7)                                                  | Friend  |
| VA   | Be very approachable and comfortable with me without them going crazy (1)    | Friend  |
| FN   | A friend but not too much of a friend (2)                                    | Friend  |
| FA   | Friendship as an adult to child, not best friends (1)                        | Friend  |
| TR   | Trusting relationship (1)                                                    | Friend  |
| OO   | One-on-one relationship with each student (3)                                | Friend  |
| CM   | Where they can come to me at anytime about anything (1)                      | Friend  |
| HT   | Honest, where they feel that they are teachers as well as me (1)             | Friend  |
| LM   | Where kids like me and see me as fair (1)                                    | Friend  |
| FC   | Fairly close, like my teacher was someone they could always talk to (2)      | Friend  |
| MU   | Where I am the leader but not scary (1)                                      | Friend  |
| CD   | Caring mentor, that there is a difference between my position and theirs (1) | Mentor  |
| CO   | A close one, sort of like family but not too comfortable (1)                 | Mentor  |
| RS   | Relaxing yet serious, depending on the situation (1)                         | Mentor  |
| OC   | Organized chaos with a strong sense of discipline (1)                        | Mentor  |
| MR   | Mutual respect (3)                                                           | Respect |
| KL   | Have the kids like me as a teacher (1)                                       | Respect |
| HI   | Honest, trusting, mutual respect (3)                                         | Respect |

|    |                                                                           |         |
|----|---------------------------------------------------------------------------|---------|
| RL | Mutual respect, we are learning together and I am not above the group (3) | Respect |
|----|---------------------------------------------------------------------------|---------|

Many of the pre-service teachers wanted relationships that are predominately child-centered. Nora was willing to be whatever the children wanted her to be:

Whatever they are comfortable with. Some kids may not be comfortable with a real close relationship, but others might. I really enjoy being personal with the kids and offering support outside of being a teacher and letting them know that I am there for things other than school. I would be willing to give them whatever they want. (# 5, p. 4)

Others struggled to balance being friends with maintaining professional boundaries. Cass described the relationship she would foster this way:

I want the students to be able to talk to me about what is going on, even in their personal lives, but I don't want them to think I am going to give them the answers. I want to instill problem-solving abilities in kids. I think that is something that you encounter all through the elementary – they are trying to start out socially how they are working and they automatically want to indulge – tell us what the right way to do this is. I would like the kids to know when it is time to get down to business and when it is time to be funny. I am that kind of person – there is a time to relax and have fun and there is a time to get serious. I would like to have both sides of that relationship with my kids. (# 24, p. 5)

Most did not want to be “above the students”; they wanted to do more in their relationship with students than only teaching subject matter. Pati is a case in point:

I really would like the kids to think of me as an awesome person, as an exciting person who they want to come talk to. What I don't want is them to think that I am the teacher that sits in front of them and talks. I want them to know that I am listening, I am human and we are learning together – we are a group and I am not above the group. (# 19, p. 6)

Joy reiterated the point that students can also be teachers:

I want the kids to know when they walk in the door that not only am I the teacher but they are the teacher too – there is going to be learning on both ends. Again I want to be a role model. I want them to look up to me. (# 32, p. 4)

Question 9. What part of the elementary education program here at Montana State University will best prepare you to be an effective teacher?

| CODE | CODE MEANING AND # OF RESPONSES | THEME       |
|------|---------------------------------|-------------|
| ST   | Student teaching (2)            | In-school   |
| PR   | Para experience (5)             | In-school   |
| IS   | In-school experience (13)       | In-school   |
| NC   | Not the coursework (2)          | Waste       |
| HD   | Human development course (2)    | Specific    |
| LC   | Literature class (1)            | Specific    |
| MO   | Math 130 (1)                    | Specific    |
| BP   | Blocks and Paras (5)            | Combination |
| EV   | Everything (5)                  | Combination |
| MC   | Methods courses (1)             | Methods     |
| DK   | Don't know (3)                  | Don't know  |

Literature reveals that people learning to teach often see coursework as unnecessary (Furlong & Maynard, 1995; Fuller, 1969). In this study, several different themes arose from the interviews with the pre-service teachers that better explain this phenomenon.

The first theme arose from participant responses citing different in-school experiences as the key to learning how to be a teacher. Ena responded this way:

I think the most beneficial part is when I am going to do my blocks, interacting with different teachers and seeing how they teach. I think that seeing it, I can learn better than reading it in books. (# 6, p. 3)

Many of the participants who fit into this category talked about the need to “see” the classroom accurately with the help of experienced teachers. Cass reiterated Brook’s views:

Probably the student teaching. Probably the last year when we are in the classroom and seeing other people’s abilities. (#8, p.2)

Others saw the benefit of a specific class or the combination of coursework and practical experience. However, when the researcher specifically asked about core coursework, an interesting trend emerged. Some pre-service teachers do not define “coursework” to include *core* coursework. Instead, they see coursework as only the courses offered during the professional phase of teacher preparation. Lucy is one example:

Researcher: What part of the elementary education program here at Montana State University will best prepare you to be an effective teacher?

Lucy: Probably right now the paras. The most experience I will get in school is just by observing the other teachers and stuff. It is hard to prepare teachers because you have to just get into it and find your own way of doing it.

Researcher: What does the coursework do for –

Lucy: They pretty much help you to write out your lesson plans to help you organize – help you to learn how to teach.

Researcher: Is it beneficial?

Lucy: Some classes are. The ones that are good have good teachers. I don’t know – some teachers don’t know what they are talking about. We have like one new teacher and she probably doesn’t know things as well.

Researcher: What benefit, if any, do your core courses have in helping you to be an effective teacher?

Lucy: *Core classes don't really have to do with teaching do they?* [Italics added] Nothing – there was one class where you had to write a lesson plan - I don't know, nothing really has prepared me or given me the idea of what teaching is going to be like. (# 13, p. 3)

The pre-service teachers in this study did not see the need for teachers to possess a strong content knowledge in different subjects – the goal of core coursework. Karri, a freshman, replied:

Right now I really can't say any of my classes are beneficial. Microbiology isn't really going to do much. I have a psychology class and we haven't gotten very far into it – maybe it will later, and then my multicultural education class is not what I thought it would be. It is more of an Indian education class and that is all we have talked about so far. Right now I can't really say that any of my classes are going to make a huge effect on my teaching. (# 21, p. 4)

Irma's response to this question is another example of pre-service teacher's tendency to view their core coursework as unhelpful:

I think probably the blocks and paras – getting the actual this is how you teach this and being in the classroom and seeing how the teachers do it and getting to experience it myself. The first few years I think are just kind of a joke with all the core classes that are required. I don't think they will really help me – geography, chemistry – I am not going to use anything that high level with elementary students. (# 2, p. 3)

Todd said that he regarded coursework in the professional phase as more important than core coursework:

Yeah – it is more applicable. We are going to use that stuff [professional phase coursework] all the time. We are building on that every time so we have to know what we learned the first, second, third, fourth week and so we are more able to remember it. We are not going from one thing to the next, to the next, to the next, [as in core coursework] you are not reviewing over anything, or reusing anything. (# 28, p. 6)

Others felt that teaching elementary school freed them from a need to understand the subject matter well. Edna responded:

I know I wouldn't want to be a college professor. It seems too stressful and hectic and not as easy as in elementary where you can say okay kids, naptime, or whatever. (#1, p. 5)

Question 10. How important is it for a teacher to be able to control students' behavior?

| CODE | CODE MEANING AND # OF RESPONSES                                     | THEME      |
|------|---------------------------------------------------------------------|------------|
| RI   | Real important; if not, then chaos results (2)                      | Disruption |
| VI   | Very important; if not behaving, then they are a disruption (10)    | Disruption |
| RO   | Real important; must have order (2)                                 | Disruption |
| LD   | Students need to learn discipline (1)                               | Disruption |
| HM   | Happy medium; run around but not wild (1)                           | Disruption |
| GC   | Teacher needs to be able to gain control (2)                        | Respect    |
| PU   | Teacher will be "pushed-over" if cannot maintain control (3)        | Respect    |
| LU   | Teacher will not be effective and kids will not look up to you (3)  | Respect    |
| NP   | Fun and approachable, but not a "push-over" (1)                     | Respect    |
| IO   | Important, or they are not learning (5)                             | Learning   |
| NO   | Teacher should not overpower the individual (1)                     | Hands-off  |
| TS   | Teacher should let students manage themselves (4)                   | Hands-off  |
| AV   | Teacher should avoid getting involved in behavioral problems (2)    | Hands-off  |
| KB   | Teacher cannot really control behavior; best to keep them busy (1)  | Hands-off  |
| PW   | Teacher should handle the problem in most positive way possible (1) | Hands-off  |
| BK   | Let "kids be kids" and not embarrass them (1)                       | Hands-off  |

Four themes arose from the participant's responses to this question. The first was a desire on the participants' part to limit disruption in the classroom. Pati explained it this way:

I think it is pretty important. If your classroom is out of control then you are not teaching; you are spending your whole time disciplining them. I think it is pretty important for the classroom to be focused. It doesn't bother me to have a classroom that is busy looking – I don't mind talking between kids as long as work is getting done. (# 19, p. 7)

The "learning" theme was similar to the "disruption" theme, except that responses categorized under the "learning" theme seemed focused more on student outcome than on personal outcome. Deva was one example:

I think it is really important because if you turn it into a babysitting job you are not going to be doing the teaching that you should be doing. If you are firm at the beginning and they understand what their role is in the classroom, then they can learn a lot more. (# 17, p. 5)

Some of the participants equated "control" with a need to be respected. They were concerned about losing positional authority in the classroom. Kim explained it this way:

Very important. If the teacher can't gain control of the classroom at any time then the students are going to walk right over the teacher and do what they want to do. It would be more of a recess time. I don't think you need to have a strict control factor, but they need to know you are the authority. (# 14, p. 7)

The researcher defined the last theme as "hands-off." Several of the pre-service teachers interviewed felt that a teacher should not attempt to control behavior. They worried that attempts to influence behavior would negatively impact pupils. Irma responded:

A teacher shouldn't overpower how a student is. You don't want them to become a whole new person, but the teacher needs to have control over the classroom and keep things under control. You don't want to suppress children. (# 2, p. 5)

Question 11. What ideas from your own experiences as a student in K-12 classrooms will you use when you teach?

| CODE | CODE MEANING AND # OF RESPONSES                                                | THEME             |
|------|--------------------------------------------------------------------------------|-------------------|
| IL   | The things I liked as a student (18)                                           | Personal positive |
| LT   | To be like the teachers I enjoyed (8)                                          | Personal positive |
| IW   | I was given control and retained more, so I will do the same (1)               | Personal positive |
| CS   | To care for the students, because I had teachers who didn't (2)                | Personal negative |
| RW   | To relate well with the students, because I remember teachers who didn't (3)   | Personal negative |
| WT   | I wouldn't teach the way I was taught, because it was all lecture and test (1) | Personal negative |
| PE   | I got my ideas from my experiences (1)                                         | Experience        |
| EJ   | To use humor and make class fun (1)                                            | Enjoyment         |
| DR   | Don't remember (5)                                                             | Don't remember    |

Nearly all of the participants were able to recall experiences from their past that they plan to use when they themselves become teachers. Negative memories about things that happened to them as students were as powerful as positive memories. The negative memories were of teachers who did not seem to care or who taught in ways that the participant found boring or uninspiring. Nora and Todd are two examples:

There is always the bad experiences that stick in your mind – the teachers that just made you feel that they are there from eight in the morning until three o' clock in

the afternoon – you don't matter to them as a person, I guess. That is one of the harder things – I think your favorite teachers are always the ones who make you feel like you are cared about and that it is important to them to know that you are doing okay in all aspects, not just a certain curriculum. I think just trying to show kids that you are there and supportive and you care about them as a person. (# 5, p. 5)

Strong relationships, like I was saying. I don't think I would do much of anything the same besides the teachers that I liked that built relationships. I wouldn't teach the same way they taught. It was all lecture-based and test – I can't remember anything I learned. (# 28, p. 7)

Other participants had positive memories of past teachers and how they taught.

Nicole recalled ideas used by past teachers that she plans to use as well:

A variety of everybody's – I didn't like it when everything we did was just manipulatives because if you didn't get it once, you never had a chance to go back and try. Sometimes you need those practice worksheets, but I wouldn't do just that. I had a teacher that used – he called them wacky-wordies. The word inclined and it was in steps – he used those at the very beginning of class and so everyone was always very attentive. We were always ready to start class. We had different things that I really liked that I would like to use in my classroom. (# 31, p. 5)

Zeke wants to be like teachers from his past whom he remembers fondly:

Kids remember teachers that they like and that they don't like. I think I will try to pattern myself after the teachers that I liked and do the sort of things they did. You know the teachers that you just got along with really well and you know the teachers that just rubbed you the wrong way. I would just like to be one of those teachers that the kids like. You have to have good interaction with the kids – you have to laugh with them and tell jokes. You can't be really harsh with them. (# 7, p. 3)

Hana responded this way:

I want to make learning fun and use ideas and creative ways to learn so that you are not just sitting there reading a book. Make it fun for the kids so they actually want to learn and they want to be there. Pretty much have fun, I guess.

Researcher: Are those your ideas that you developed from your experience in K-12?

Hana: Yeah. The more the teacher was into the class and wanting to be there and happy, the more you want to be there and learn and you want to go to class than if you are just sitting there doing the same thing day after day. ( # 33, p. 4)

Question 12. What effect has/will your college coursework had/have on your conceptions about teaching?

| CODE | CODE MEANING AND # OF RESPONSES                                                     | THEME      |
|------|-------------------------------------------------------------------------------------|------------|
| FP   | Want to be like the college professors who are fun (2)                              | Reinforced |
| GC   | MSU has grounded my prior conceptions (2)                                           | Reinforced |
| HI   | Blocks are helping me see that once I get the hang of it I will be ok (2)           | Reinforced |
| CB   | It has confirmed most of my beliefs (1)                                             | Reinforced |
| MS   | I am seeing now that curriculum is more specific than I thought (1)                 | Change     |
| CK   | I was taught to sit still; here MSU teaches to let children construct knowledge (1) | Change     |
| LI   | Lots of influence; MSU is teaching the right way, not like I was taught (1)         | Change     |
| BU   | I see how all subjects tie together now (2)                                         | Change     |
| NE   | Teaching is not as easy as I thought (3)                                            | Change     |
| BC   | It will give me a better conception from what I have right now (4)                  | Filtering  |
| BO   | Will build upon prior conceptions (4)                                               | Filtering  |
| JS   | Learning about lesson plans and job specifics (3)                                   | Filtering  |
| PC   | I will go in with preconceptions of what I want to do, but these will change (1)    | Filtering  |
| WH   | It will help (5)                                                                    | Filtering  |
| NM   | Not much; I have already got them from past experience (3)                          | Imbedded   |
| FP   | Effective instructors are those who care; blocks should teach more "hands-on" (2)   | Imbedded   |

|    |                                                                              |          |
|----|------------------------------------------------------------------------------|----------|
| DW | I am learning what I won't do; the MSU philosophy is different than mine (1) | Imbedded |
| NS | MSU does not tell students the negative side of teaching (1)                 | Imbedded |
| HN | Hopefully it won't have too much of an effect on the way I teach (1)         | Imbedded |

The researcher was able to identify four separate themes that arose from analysis of this question. Three of the four themes involved responses that indicated the participants were building their present conception of "teacher" from past conceptions. Some of the participants reported that coursework reinforced their previously developed conceptions. Nicole said:

So far it has confirmed most of the beliefs and what I want to do. (# 31, p. 5)

Pati felt that the coursework has "...grounded my preconceptions a little better. I think I will know a little more of what to expect as far as working in a group setting" (#19, p. 7).

Other participants filtered what they obtained from the coursework through prior conceptions developed while they were in grade school. These participants understood that they were bringing prior conceptions with them to college. They intended to use their prior conceptions to inform their teaching. Mary replied:

I think that they [professional coursework] will influence it [learning to be a teacher]. This is what I am going to base a lot of my teaching on. I have my own prior conceptions, of course, but I am going to build on that so that I will become a more effective teacher. ( # 10, p. 5)

Cody expresses confidence that the coursework would improve his conceptions:

It will give you a better conception from what I have right now. What I have right now is just high school and elementary. (# 35, p. 4)

Many of the participants refused to accept anything from the coursework. They were content to rely solely on the prior conceptions of teaching developed from their

past. Ann hoped that the material presented to her in class would not influence her current conceptions:

It depends on the courses I take. Hopefully it won't have too much of an effect on the way I teach. I don't want to teach humdrum. (# 29, p. 4)

Others have already established their philosophies of teaching and feel that the coursework attempts to influence them to be something they don't want to be. Deva replied:

Being that I agree more with the classical model than today's public education philosophy, I think that I am learning a lot of things that I don't want to do as well as things I want to do. I think that the biggest thing I am learning right now is that I can't teach in a relativistic environment. I can't say you do this and then later say whatever you think is okay. I think that in my classes it has really pushed to be relativistic and I don't think you can teach based on that. (# 17, p. 6)

Zeke described the impact his coursework is having on his conceptions about teaching:

I don't think it has changed my conceptions about teaching too much. I have only been here about a month and so it is hard to tell. I don't think that it will change my conceptions too much. I think I have already got them from interaction with kids and such. (# 7, p. 4)

Uma explained her views about the effects of coursework on her conceptions about teaching this way:

In my first block right now, it hasn't really changed my conceptions about teaching too much, but it has really reinforced that it is going to take a lot of time and planning. (# 11, p. 8)

The participants did note the difference between core and professional classes when describing the effect of coursework on their conceptions. Jane replied:

I think the block classes are pretty good, but I do think that some parts of the pre-block classes – some of my professors are into that – they just come in and they are just there because they have to teach the class and it

makes it really hard for anybody to get anything out of the class. ( # 12, p. 7)

Question 13. What effect has/will your college instructors have/had on your prior conceptions about teaching?

| CODE | CODE MEANING AND # OF RESPONSES                                              | THEME      |
|------|------------------------------------------------------------------------------|------------|
| MM   | Being a college instructor is different from being a school teacher (2)      | Disconnect |
| HT   | They have taught in elementary school and can provide accurate info (8)      | Trust      |
| WT   | The way they teach and the methods they use and the projects they assign (2) | Trust      |
| MS   | They may set me in the right direction and erase preconceptions (2)          | Trust      |
| BP   | Some are able to prepare us for everything, like behavior problems (1)       | Trust      |
| GI   | They will give me ideas I have not thought of before (5)                     | Trust      |
| DB   | You don't want to be like those who lecture; you do, those who are fun (1)   | Mistrust   |
| GS   | Not nearly as much as my grammar school teachers (1)                         | Mistrust   |
| DH   | Some don't know how to teach, they can't make learning fun (2)               | Mistrust   |
| NC   | They have not changed my views or what I expect teaching to be like (3)      | Mistrust   |
| DA   | I don't agree with their philosophies (1)                                    | Mistrust   |
| NN   | So far none, because I have taken only core courses (2)                      | Mistrust   |
| NA   | There are teachers that I would not emulate, I didn't like them (1)          | Mistrust   |
| IC   | I will take what they say into consideration, but I will do what I want (1)  | Mistrust   |
| NG   | Those who are nice, caring, and understanding are good (8)                   | Qualified  |

The researcher identified two main themes from the analysis of this question. The participants either trusted or mistrusted professors' ability to provide information about teaching. Mary shared her feelings of trust:

Just today one of my teachers kind of convinced me that one of my thinking might not be right. She said if you want to be a friend with your kids, that creates a dependency that you maybe don't want. I think that the teachers will maybe set me in the right direction and kind of erase the preconceptions that other teachers had that maybe aren't so right. (# 10, p. 5)

Jane, on the other hand, described her feelings of mistrust when asked about the role professors play in helping students develop accurate conceptions about teaching:

Well, some of the professors here at MSU don't know how to teach and it can be evident. Quite often they are worse than anything you would see in K-12. I think that is because so many of them don't get taught how to teach or learn any of that kind of stuff. (# 12, p. 6)

The participants seem to accept more from courses that are taught by professors whom they deem as caring and fun. Irma explained:

You see some [professors] and you definitely don't want to be like them because they are so boring – it is all lecture, very monotone – and then you see some that are really animated and really get into it. (#2, p. 7)

Betty likewise expressed this belief in the importance of being "enthusiastic":

The things I notice about teachers is if they're enthusiastic about the subject, then the students are enthusiastic about the subject. There are some teachers where I am just like, "Why are they teaching?" because they just don't seem like they enjoy the subject or the students. Some of that builds my ideas – I need to be enthused about my students and subjects. (# 3, p. 4)

Question 14. Do you think your present conceptions about teaching are accurate?

| CODE | CODE MEANING AND # OF RESPONSES                                            | THEME      |
|------|----------------------------------------------------------------------------|------------|
| PT   | Yes, they come from the teachers I have had (2)                            | Experience |
| PE   | Yes, I have been in lots of elementary school situations (1)               | Experience |
| AT   | Yes, I have been around many teachers (2)                                  | Experience |
| LR   | Yes, a lot are right and some are not (1)                                  | Experience |
| EC   | Yes, I have experienced what goes on in a classroom (2)                    | Experience |
| AV   | Yes, I think I have a fairly accurate view (6)                             | Experience |
| FT   | Yes, I have an accurate view because I grew up in a family of teachers (1) | Experience |
| OW   | Yes, because I have observed and watched kids (2)                          | Experience |
| OT   | Yes, I have been in classrooms while others are teaching (2)               | Experience |
| MT   | Yes, I have had 20 K-12 teachers and 30 more since college (1)             | Experience |
| OH   | I hope so, out of high school I had a good perception of teaching (1)      | Hope       |
| HE   | I hope so, because I have a lot of experience in the classroom (1)         | Hope       |
| HP   | I hope so (5)                                                              | Hope       |
| CH   | Not completely, they are changing (1)                                      | Filtering  |
| PC   | Yes, but they will probably change (10)                                    | Filtering  |
| PN   | Probably not, I have not taught a class yet (1)                            | Change     |
| DK   | Don't know (1)                                                             | Don't know |

Most of the pre-service teachers interviewed are confident that their conceptions of teaching are accurate. They cite different reasons why they feel this way, many of which have some relation to past experiences. Some participants feel that their

conceptions are accurate because they perceive their conceptions as being derived from observations of teachers they have had in the past. Gale responded:

I do – just from what I have seen other teachers that I have had in the past and people around me. (# 23, p. 6)

Ena replied:

Yeah. I have been around a lot of teachers and – I don't know, it might change a little bit just because of how the world is. I have always known what I was going to do when I started teaching and it has always been in my head. (# 6, p. 5)

Others feel that their view of the classroom is accurate because it is based on their own past experiences in the classroom setting. (It should be reiterated that none of the participants has worked as certified teachers in an elementary school setting.) Betty explained:

I think to a certain point they are just because I have been in lots of elementary situations. (# 3, p. 5)

Zeke replied:

Yeah, I do think so. I have been through two different schools – yeah, I think they are. (# 7, p. 4)

Peg, likewise, believes that her experiences in the classroom thus far have already afforded her an accurate view of teaching:

Uh huh – pretty accurate. I guess I have been around kids so much – I have tried to get in the schools as much as I can, and so I feel like I know how kids think, and I really feel like my expectations and stuff are pretty much what they are going to be. I know that there is going to be changes and things that come up. For the most part, I think that my ideas about teaching are pretty much right on. (# 34, p. 6)

Jill concedes that her experience is limited, but she still believes that her conceptions are accurate:

Pretty accurate because I am very – I don't just jump to conclusions or I don't base what I am saying on nothing. I feel like I haven't had a ton of experience, but I have had enough to bring it together – I am seeing kids, I am observing and watching them. I am reading things that are current. I have my own opinions. Up to this point, I have had outside influences like other teachers. All of those, compounded together, make me feel like I have an okay view. (# 22, p. 7)

Kay is so confident in her present conceptions that she declared she would have to rethink her career choice if those conceptions prove false:

I think they are accurate because if they weren't accurate I would have to rethink why I want to become a teacher. (# 9, p. 7)

Others, like Fifi and Cody, "hoped" that their conceptions are accurate:

I hope so. I think so because I have a lot of experience in the classroom, and I just kind of know what is going to be going on and stuff like that. (# 36, p. 6)

I hope they are. I believe I am probably on about a fifty-fifty basis with that because every school is different in the way that teachers teach. I think fresh out of high school I had an okay perception of it. (# 35, p. 5)

Question 15. Do you think the ideas about teaching you developed through your years in K-12 classrooms will be more useful than your college coursework in learning how to be a teacher?

| CODE | CODE MEANING AND # OF RESPONSES                                             | THEME      |
|------|-----------------------------------------------------------------------------|------------|
| ET   | Yes, the ideas I already have are what I will use to teach (2)              | Experience |
| MI   | Yes, the conceptions I already have are far more important than college (3) | Experience |
| BR   | Yes, K-12 provides a better reference (2)                                   | Experience |
| NT   | Yes, my past experience has taught me what not to do as a teacher (1)       | Experience |
| KN   | Yes, the basics I learned in kindergarten (1)                               | Experience |

|    |                                                                                        |              |
|----|----------------------------------------------------------------------------------------|--------------|
| HL | Yes, the most prominent ideas are those I have had the longest (1)                     | Experience   |
| EX | Yes, people learn more from experience than from a book (2)                            | Experience   |
| SM | Both are about the same (9)                                                            | Filtering    |
| EQ | Equal; it is important to remember how you felt as a student and get concrete info (3) | Filtering    |
| NB | Coursework ideas are not bad, they just need a little revitalizing (1)                 | Filtering    |
| GC | They give me a clue of what I hope to gain in college (4)                              | Filtering    |
| PR | My K-12 experience is where I got my personality and ideas (1)                         | Filtering    |
| MB | More useful than core courses but not more than blocks (3)                             | Filtering    |
| NN | Not necessarily; what I learned before was just a thought, here I am learning how (1)  | Insufficient |
| NK | Not more useful; going through school didn't give me the knowledge (1)                 | Insufficient |
| NM | No, I don't remember much from my K-12 experience (2)                                  | Insufficient |
| WS | No, I was on the wrong side of the desk (2)                                            | Insufficient |
| MA | No, now I learn more about what I would do (1)                                         | Insufficient |

Many of the participants believed that the conceptions they developed as students in K-12 classrooms would be more important than the coursework at Montana State University in learning how to be a teacher. Some, like Nicole and Amy, have already decided to use the conceptions they brought with them to college instead of what the university coursework provides:

I think part of the whole teaching experience is actual – it is not something you can be taught in a classroom. I don't think there is a right and a wrong way to teach. I think it is really hard for somebody to pin down on how you should teach. They give you great ideas and I love to use the ideas, but I will take the ideas that I want to use that go with my teaching style. I think that your K-12 is a huge part of your life that you have spent with teachers and you know what worked for you,

but you also know what worked for the other students that didn't work for you. I think that actual experience is far greater. (# 31, p. 8).

I think it is more important. I think what we learn in college is the basics to be a teacher, but mostly I saw how the teacher reacts to certain problems, to something that they have not expected. I personally think experience is more important to just sitting in class. (# 30, p. 4)

Other participants have decided to filter what they learn through previous experience. Mary put it this way:

I think that the K-12 experiences are going to definitely impact everything that I have in teaching because that is where I got a lot of my personality, my ideas. I went through the classes and so the personalities that the teachers have, that is what I like about them. I want to emulate that, but also I can't remember my kindergarten teachers and so I think the curriculum at Montana State will help me. (# 10, p. 6)

Question 16. How will your prior conceptions about teaching, formed while you were a student in K-12 classrooms, impact the teacher education curriculum here at Montana State University?

| CODE | CODE MEANING AND # OF RESPONSES                                                                  | THEME      |
|------|--------------------------------------------------------------------------------------------------|------------|
| IS   | I saw my teachers as caring, and that is how I want to be seen (1)                               | Experience |
| ME   | My experiences showed me what I should do, I can take from the courses what I want (4)           | Experience |
| DP   | If the professor's philosophies are different from mine, then I will reject what he/she says (1) | Experience |
| HI   | It will have an impact because I have had experience in classrooms as a student (4)              | Experience |

|    |                                                                                                       |             |
|----|-------------------------------------------------------------------------------------------------------|-------------|
| GN | I want the professors to give me what I need in order to be like effective teachers<br>I have had (1) | Experience  |
| FM | The courses are taught in a way that were frustrating for me as a student (1)                         | Experience  |
| PT | I would call previous teachers with more experience if I disagreed with a<br>professor (1)            | Experience  |
| IW | I would listen, but ultimately it will be what I want to do (6)                                       | Filtering   |
| AL | A little, because I remember when a teacher did something I liked or didn't like<br>(5)               | Filtering   |
| LB | I'm going to learn through college, but prior ideas will keep sticking through (6)                    | Filtering   |
| SP | I was surprised at how hard MSU makes it to become a teacher (1)                                      | Filtering   |
| GW | I would go with what the professors told me, I think (1)                                              | Filtering   |
| AF | There was more of an impact when I first started college (1)                                          | Filtering   |
| AC | I am more capable of accepting what professors say (2)                                                | Accepting   |
| NI | No impact (1)                                                                                         | Accepting   |
| BO | My prior conceptions are different and I need to be open to what is being taught<br>(2)               | Accepting   |
| MP | My prior conceptions don't affect me (1)                                                              | Accepting   |
| ND | I didn't develop prior conceptions (1)                                                                | Undeveloped |

Many of the participants concluded that their conceptions about teaching, developed while they themselves were K-12 students, would impact their acceptance of the teacher education curriculum at Montana State University. Irma and Fifi explained:

My experiences showed me what I want to do and do not want to do. Here I am learning stuff and I can kind of put all of that together and figure out how I want to be. It is not going to change the curriculum itself, but it is going to change what I do with the curriculum. The teachers do what they do – say the same thing year after year probably – I can take from that what I want. (# 2, p. 8)

I think the K-12 experience is going to be a major part of how I teach over my coursework. All the time you are in K-12 and then just four years in college – it is just a rundown to tell you what might happen and stuff like that, K-12 you have been in the classroom for thirteen years with different kids, seeing what is going on behind the teacher's back. I believe that is the best benefit is the K-12 experience. (# 36, p. 7)

Jill is determined to ignore what is presented in class if it conflicts with what she has already conceived from past experience:

...when I was in elementary school there was some stuff that was stupid, shouldn't have been taught and is still being taught today. When I see something like that being taught that I remember being taught to me, I can pretty much knock that off – that doesn't work for me as a teacher and it probably won't for a group of students. Just knowing what didn't work when I was a student is going to help me know what is not going to work when I am a teacher. (# 22, p. 9)

Kim feels that her methods instructors need to be more like her K-12 teachers:

When I was in K-12, I learned by doing. The teachers always seemed to – if they lectured and a student didn't understand it, they would try another way to help or give them a different example. In methods I haven't had that. They talk about all these different ways we should teach to our kids or help our kids learn, yet they are not modeling it. (# 14, p. 11)

Joy explained the impact of her preconceptions this way:

Let's say I was in fifth grade and I had a terrible science experience, and then I get into my methods class and they are showing me all these interesting ways of making a science experience in fifth grade not terrible – I could tell that professor the ideas are great, and that I didn't have this when I was in fifth grade, so keep doing this. If my methods class for science was terrible, I could say this isn't helping me, this is what I had in fifth grade and I didn't like it so is there any way to bring in something else to teach me and my peers to make it more enjoyable? You can bring your experiences into your college classes. (# 32, p. 9)

Combination Matrix

|                         | Mary     | Betty    | Cody | Amy     | Ann     | Kay  | Zeke | Cher    | Cari | Cass |
|-------------------------|----------|----------|------|---------|---------|------|------|---------|------|------|
| Gender                  | F        | F        | M    | F       | F       | F    | M    | F       | F    | F    |
| GPA                     | 3.5      | 3.8      | 3.5  | No resp | No resp | 2.8  | 3.0  | No resp | 3.8  | 3.6  |
| Age                     | 18       | 18       | 18   | 18      | 25      | 36   | 18   | 19      | 18   | 17   |
| Age at decisn           | 8        | 10       | 17   | 11      | 25      | 6    | 18   | 5       | 6    | 17   |
| Freshman vs. junior     | F        | F        | F    | F       | F       | F    | F    | F       | F    | F    |
| Grade preferred         | 2-4      | K-2      | K    | K-1     | K-2     | K-5  | 2-5  | K-2     | 3-5  | K-2  |
| Def. of effective       | 0        | 0        | 0    | 0       | 0       | 0    | 1    | 0       | 0    | 0    |
| Courswk vs. practical   | E        | E        | C    | P       | E       | E    | E    | C       | E    | P    |
| Cnf in skills (%)       | 90       | 70       | 40   | 30      | 70      | 60   | 60   | 50      | 80   | 50   |
| SOQ                     | I        | T        | I    | I       | I       | T    | I    | T       | I    | I    |
| TGI                     | 6        | 4        | 2    | 5       | 2       | 2    | 4    | 6       | 6    | 3    |
| Primary role of teacher | 6        | 3        | 2    | 5       | 2       | 5    | 5    | 5       | 2    | 5    |
| #1                      | AG       | FS       | HS   | MS      | NT      | FS   | SX   | PT      | SD   | HS   |
| #2                      | FC       | FC       | GB   | FN      | HF      | DO   | EJ   | RW      | FC   | FN   |
| #3                      | HS       | HS       | HS   | IK      | AC      | DC   | ES   | FG      | MS   | UA   |
| #4                      | PT       | RK       | CM   | LK      | KW      | HC   | LK   | DK      | PT   | BT   |
| #5                      | YSA<br>T | YSC<br>R | YSLF | NO      | YSCR    | YSLF | NO   | YSBH    | YSLF | YSLF |
| #6                      | BK       | FN       | PT   | FD      | CR      | LF   | LM   | LU      | FN   | LF   |
| #7                      | SD       | LU       | NK   | KC      | IK      | SK   | IK   | SE      | TO   | LU   |
| #8                      | FN       | PR       | OO   | FR      | PR      | VA   | KL   | OO      | MR   | PR   |
| #9                      | DK       | ST       | HD   | IS      | IS      | IS   | HD   | DK      | IS   | ST   |
| #10                     | LU       | IO       | RO   | RO      | VI      | NP   | HM   | UI      | GC   | LU   |
| #11                     | LT       | LT       | EJ   | LT      | IL      | CS   | LT   | LT      | IL   | IL   |
| #12                     | BO       | WH       | BC   | BC      | HN      | WH   | NM   | WH      | PC   | JS   |
| #13                     | MS       | DH       | HT   | MM      | NC      | NG   | GS   | NN      | IC   | GI   |
| #14                     | HP       | PE       | OH   | LR      | PN      | EC   | EC   | FT      | AV   | OT   |
| #15                     | PR       | SM       | MB   | BR      | EX      | GC   | MI   | KN      | ET   | GC   |
| #16                     | DP       | IW       | LB   | LB      | IW      | SP   | GW   | IW      | IW   | HI   |

|                          | Meg      | Nick  | Mary     | Dora     | Edna | Ena | Fifi | Gale | Hana  | Jay      |
|--------------------------|----------|-------|----------|----------|------|-----|------|------|-------|----------|
| Gender                   | F        | M     | F        | F        | F    | F   | F    | F    | F     | M        |
| GPA                      | 3.2      | 3.2   | 3.9      | 3.5      | 3.5  | 2.8 | 3.2  | 3.5  | 3.8   | 2.8      |
| Age                      | 18       | 18    | 18       | 18       | 18   | 18  | 19   | 18   | 18    | 19       |
| Age at decision          | 5        | 17    | 6        | 17       | 17   | 6   | 17   | 15   | 10    | 18       |
| Freshman vs. junior      | F        | F     | F        | F        | F    | F   | F    | F    | F     | F        |
| Grade preferred          | ALL      | 2,7-8 | K-2      | 3        | 6-8  | 1-3 | ANY  | K-2  | 2,4-5 | K,8      |
| Def. of effective        | 0        | 1     | 0        | 0        | 0    | 0   | 1    | 0    | 0     | 0        |
| Courswk vs. practical    | E        | E     | E        | P        | C    | E   | C    | P    | C     | P        |
| Cnf in skills (%)        | 60       | 50    | 40       | 50       | 80   | 50  | 40   | 60   | 50    | 60       |
| SOQ                      | I        | I     | I        | I        | T    | I   | I    | I    | I     | I        |
| TGI                      | 6        | 2     | 6        | 6        | 4    | 5   | 2    | ALL  | 5     | 4        |
| Primary role of teachers | 5        | 1     | 5        | 5        | 4    | 6   | 5    | 2    | 6     | 5        |
| #1                       | AG       | HS    | AL       | HJ       | HJ   | FT  | PT   | MS   | FS    | HS       |
| #2                       | EJ       | WF    | CR       | WF       | HP   | FN  | FD   | GE   | FN    | FC       |
| #3                       | HS       | FG    | DK       | TH       | SH   | HS  | HS   | UA   | TR    | MS       |
| #4                       | MD       | MT    | KW       | PT       | PT   | RK  | BT   | PT   | PT    | ET       |
| #5                       | YSR<br>N | YSPM  | YSC<br>R | YSP<br>M | YSAT | NO  | NO   | YSTR | YSFC  | YSP<br>M |
| #6                       | FD       | FN    | CR       | TI       | AE   | EF  | LM   | LM   | LM    | GA       |
| #7                       | HI       | HK    | IK       | HK       | HK   | TC  | NK   | HK   | IK    | HI       |
| #8                       | FR       | FC    | AI       | HI       | FC   | FR  | PR   | RL   | OO    | LM       |
| #9                       | NC       | EV    | IS       | EV       | DK   | IS  | IS   | NC   | EV    | IS       |
| #10                      | LO       | VI    | RI       | VI       | RI   | GC  | VI   | VI   | PW    | BX       |
| #11                      | LT       | LT    | IL       | IL       | IL   | IL  | PE   | DR   | IL    | IL       |
| #12                      | BC       | NE    | BC       | BO       | FP   | HI  | BO   | WH   | NM    | BC       |
| #13                      | NG       | GI    | NN       | HT       | MM   | WT  | NC   | NG   | NG    | GI       |
| #14                      | AV       | PC    | PC       | HP       | PT   | AT  | HE   | PT   | PC    | AV       |
| #15                      | BR       | SM    | SQ       | SM       | NN   | MI  | MI   | EX   | GC    | GC       |
| #16                      | IW       | BO    | LB       | LB       | IS   | LB  | ME   | IW   | LB    | AL       |

|                          | Ed       | Irma | Kim      | Jade    | Sue     | Uma  | Todd     | Jean | Tom      | Joy  |
|--------------------------|----------|------|----------|---------|---------|------|----------|------|----------|------|
| Gender                   | M        | F    | F        | F       | F       | F    | M        | F    | M        | F    |
| GPA                      |          | 3.7  | 3.0      | No resp | No resp | 3.5  | 3.8      | 3.0  | 2.6      | 3.0  |
| Age                      | 21       | 21   | 22       | 32      | 21      | 22   | 24       | 40   | 24       | 22   |
| Age at decision          | A        | 4    | 20       | 24      | 12      | 8    | 22       | 20   | 20       | 5    |
| Freshman vs. junior      | J        | J    | J        | J       | J       | J    | J        | J    | J        | J    |
| Grade preferred          | 3        | 2-3  | 1-3      | K-1     | 8       | 2-5  | 6-8      | K-3  | 3-5      | 2-4  |
| Def. of effective        | 0        | 1    | 1        | 0       | 0       | 1    | 0        | 0    | 0        | 1    |
| Coursework vs. practical | P        | E    | P        | E       | P       | E    | P        | E    | E        | E    |
| Cnf in skills (%)        | 70       | 70   | 70       | 70      | 70      | 80   | 80       | 70   | 70       | 70   |
| SOQ                      | I        | I    | I        | I       | T       | I    | T        | I    | I        | I    |
| TGI                      | 2        | 2    | 6        | 1       | 4       | 5    | 6        | 1    | 5        | 6    |
| Primary role of teachers | 5        | 5    | 2        | 5       | 2       | 3    | 5        | 3    | 3        | 5    |
| #1                       | HJ       | AG   | TR       | SO      | MS      | SO   | TR       | FH   | TR       | TR   |
| #2                       | SR       | WF   | CR       | HW      | RW      | HW   | FC       | GE   | WF       | CR   |
| #3                       | SP       | SP   | DK       | CO      | UA      | TH   | CO       | CH   | CO       | CR   |
| #4                       | BT       | PT   | MT       | OK      | PT      | CC   | MT       | WR   | PT       | KW   |
| #5                       | YS<br>EG | YSIA | YSR<br>C | NO      | YSLF    | YSGS | YSD<br>T | YSLF | YSD<br>C | YSLF |
| #6                       | BK       | CR   | PT       | ES      | LA      | ES   | LI       | LF   | TT       | BK   |
| #7                       | RM       | BC   | LU       | BC      | LU      | HI   | CH       | GT   | BC       | IK   |
| #8                       | FA       | MU   | FR       | MR      | OC      | RL   | MR       | HI   | FR       | HT   |
| #9                       | IS       | BP   | PR       | PR      | IS      | BP   | MO       | EV   | BP       | BP   |
| #10                      | PU       | NO   | AV       | TS      | TS      | IO   | VI       | AV   | KB       | IO   |
| #11                      | DR       | IL   | IL       | DR      | IL      | RW   | WT       | IL   | IL       | IL   |
| #12                      | NE       | MS   | FP       | CK      | CB      | NM   | JS       | LI   | HI       | NE   |
| #13                      | NC       | DB   | NG       | GI      | NA      | HT   | NG       | WT   | MS       | NG   |
| #14                      | OT       | AV   | PC       | CH      | MT      | PC   | HP       | PC   | AV       | PC   |
| #15                      | MB       | NK   | MB       | NM      | ET      | WS   | MA       | NB   | SM       | SM   |
| #16                      | PT       | ME   | FM       | AC      | ME      | HI   | BO       | NI   | AC       | IH   |

|                          | Kim      | Deva | Lucy     | Jane | Peg  | Pati | Nora | Deva | Jill     | Cass |
|--------------------------|----------|------|----------|------|------|------|------|------|----------|------|
| Gender                   | F        | F    | F        | F    | F    | F    | F    | F    | F        | F    |
| GPA                      | 3.0      | 2.8  | 3.0      | 3.7  | 3.6  | 3.5  | 3.2  | 3.0  | 3.2      | 3.5  |
| Age                      | 22       | 22   | 21       | 21   | 22   | 40   | 22   | 21   | 21       | 22   |
| Age at decision          | 18       | 19   | 19       | 18   | 4    | 5    | 20   | 5    | 19       | 19   |
| Freshman vs. junior      | J        | J    | J        | J    | J    | J    | J    | J    | J        | J    |
| Grade preferred          | 2-3      | 1,3  | 2-3      | 4-8  | K-3  | 1-3  |      | 2-8  | K-1      | 3-5  |
| Def. of effective        | 0        | 1    | 1        | 0    | 0    | 0    | 1    | 1    | 0        | 1    |
| Coursework vs. practical | P        | P    | E        | P    | E    | E    | E    | P    | C        | P    |
| Cnf in skills (%)        | 60       | 80   | 50       | 60   | 70   | 30   | 60   |      | 30       | 60   |
| SOQ                      | S        | T    | I        | I    | S    | I    | I    | S    | I        | T    |
| TGI                      | 5        | 6    | 6        | 2    | 1-6  | 6    | 6    | 2    | 6        | 2    |
| Primary role of teachers | 5        | 5    | 5        | 6    | 2    | 5    | 5    | 6    | 5        | 3    |
| #1                       | HJ       | SO   | TR       | HS   | AL   | PT   | TR   | FT   | SO       | SO   |
| #2                       | HW       | FN   | HC       | DO   | FD   | EJ   | CR   | HF   | SH       | DO   |
| #3                       | HS       | DK   | CO       | UA   | SG   | SX   | RC   | RC   | DK       | CO   |
| #4                       | CB       | CB   | NS       | KW   | OP   | MT   | KW   | DH   | MT       | BT   |
| #5                       | YSC<br>R | NO   | YSE<br>G | NO   | YSFC | YSIA | YSLF | NO   | YSC<br>R | NO   |
| #6                       | CP       | LM   | KI       | KR   | PT   | EF   | LF   | TI   | LU       | AR   |
| #7                       | LU       | BC   | SD       | CE   | RM   | IK   | SO   | RM   | WS       | WS   |
| #8                       | FR       | TR   | FN       | FR   | CM   | RL   | WC   | CD   | CO       | RS   |
| #9                       | PR       | BP   | PR       | IS   | EV   | MC   | PR   | LC   | IS       | IS   |
| #10                      | PU       | PU   | IO       | TS   | LU   | VI   | TS   | IO   | VI       | VI   |
| #11                      | IL       | LT   | RW       | IL   | DR   | IL   | CS   | RW   | IW       | DR   |
| #12                      | NE       | NS   | WH       | BU   | JS   | GC   | BU   | DW   | GC       | BO   |
| #13                      | HT       | HT   | BP       | DH   | HT   | GI   | HT   | DA   | HT       | NG   |
| #14                      | HP       | AT   | DK       | AV   | OW   | OW   | PC   | PC   | PC       | HP   |
| #15                      | SM       | WS   | NM       | SM   | SM   | NT   | EQ   | SM   | HL       | EQ   |
| #16                      | HI       | AF   | ND       | GN   | AL   | AL   | AL   | AL   | ME       | MP   |

## Discussion of Results

### Relationship to Prior Research

The findings in this study support the limited prior empirical research already done. Research by Furlong and Maynard (1995) established the framework for this researcher's study of how conceptions developed in K-12 impact the curriculum at MSU. Furlong and Maynard found that:

Student teachers appear to come into teaching with their own beliefs about the role of the teacher, the sort of teacher they want to be (and do not want to be) and the kind of relationship they want to develop with their pupils. This, as we indicated, is in part formed through their own memories of school (Lortie, 1975). In addition, though, their beliefs may be affected or re-affirmed by the child-centered ideology which is fundamental to the culture of today's schools. (p. 101)

Three themes are found in previous research on education majors' conceptions about teaching. These are (1) education majors develop concepts of the classroom early as students, (2) education majors come to college with idealistic preconceptions of the classroom, and (3) education majors' prior conceptions can form obstacles to instruction.

As discussed earlier in this study, Lortie (1975) proposed by projecting themselves into the teacher's position children in classrooms come to imagine what teachers feel and think. This propensity for role-taking may be especially great when the individual has already decided to be a teacher. Other researchers support Lortie's conclusions. The interviews Calderhead and Robson (1991) had with pre-service teachers support the contention that education majors have images of teaching derived from their own experiences in K-12 schools as pupils. These conceptions are highly influential in

their interpretation of the pre-block teacher education curriculum. The students seem to build their conceptions of teaching from episodic memories, relating to events from their personal past experience as children in classrooms. Lasley (1980) believed that education majors develop conceptions about teaching early in life. He supported the idea that prior schooling and cultural forces influence the beliefs of entering education majors. To reiterate, he stated:

Beliefs evolve as individuals are exposed to the ideas and mores of their parents, peers, teachers, neighbors, and various significant others. They are acquired and fostered through schooling, through the informal observation of others, and through the folklore of a culture, and they usually persist, unmodified, unless intentionally or explicitly challenged. (p. 38).

Bird, Anderson, Sullivan, and Swidler (1993), and Chan (1999) discovered that pre-service teachers develop their beliefs about teaching before entering their initial teacher training program. They also found that the content of their beliefs was closely related to past experiences. Bird (1993) found that students were highly resistant to replacing existing conceptions with new ones. He noted how teacher education courses involve an encounter of old and new ideas in the student's mind, some derived from their experience in schools and some from their experiences in the university. Bird proposes that education majors' prior conceptions provide them with reasonable alternatives to the conceptions presented in their coursework. These conceptions seem to be rigidly set in place, resistant to change, and cogent to the pre-service teacher. Hollingsworth (1989) thought that the preconceptions education majors have serve as filters influencing how they make sense of coursework content and their roles as teachers. She believed that current practices in teacher education do not force education majors to face the impact of

their prior beliefs. Instead, she felt that teacher education programs are designed to capitalize on the preexisting conceptions that education majors hold, thereby ensuring that pre-service teachers turn out to be very similar to existing teachers. Teacher education courses do this by creating a learning environment that closely resembles pre-service teachers' educational backgrounds. Pulver (1996) found that elementary education majors "create their own patchwork of practice by working new learning into previously held beliefs rather than altering previously held beliefs" (p. 166). Weinstein (1990) discovered that even after a course designed to confront the realities of teaching, education majors retained their affective definitions and conceptions of good teaching. Kagan (1992) concluded from her review of research on prior conceptions that each study documented the central role played by preexisting beliefs or images and by prior experience in filtering the content of education course work.

The researchers cited found that pre-service teachers come to college with strong ideas about teaching. These students believe that teaching is rewarding and fulfilling only. They do not conceive of how the difficulties of teaching can lead to dissatisfaction with teaching as a career. They cite their love of children as an important predictor of their classroom success, and they believe that enthusiastic people make great teachers. Furthermore, the preconceptions they have are difficult to change through standard teacher preparatory curriculums.

### Negative and Positive Findings

Qualitative analysis does not lend itself to the testing of hypotheses. Instead, it is better suited to the reporting of data. Qualitative analysis allows the researcher to generalize when he feels that the trends in the data support his contentions. The data analysis in this case presents a complex picture of the "typical" participant. The findings presented here are a conglomeration of the general findings of each interview question and the results from the written instruments. Findings from this study supported prior research and reinforced existing themes in the literature regarding the impact of pre-service teachers' preconceptions on teacher education.

Analysis of the data supports the contention that pre-service teachers arrive at Montana State University with well-developed conceptions of teaching and being a teacher. They develop these conceptions early in their lives, while they are in K-12 grade classrooms. These conceptions influence and at times limit what these students are willing to accept from the curriculum at Montana State University.

Many of the participants in this study are sure they know what will work when teaching because they perceive it to have worked while they were students. Conversely, they are sure about what won't work because they found it to be not beneficial when they themselves were students. While they report confidence in the accuracy of their conceptions about teaching and foresee an enjoyable future in education, they are unaware of many of the difficulties that many first-year teachers encounter. High workloads, lack of personal time, belligerent children, angry parents, and staff demands are all difficulties discussed within the profession. It is reasonable to expect that accurate

conceptions of teaching would include an awareness of some of these issues. Lacking classroom experience as certified teachers in sole charge of several dozen students does not make student teachers dubious about their preconceptions. Instead, many of them are convinced that their conceptions of teaching represent the "truth." It does not occur to them that these conceptions were developed as children and, therefore, are suspect. Past conceptions of teaching and prior teachers influenced quite a number of the participants to enter the profession. Several of them see teaching as an easier job than most and welcome the limited challenge they believe it to be. They look forward to the "kids" and to their personal interactions with them. They expect to use much of what they saw their own K-12 teachers use, and they trust these preconceptions about what constitutes effective teaching more than the coursework at Montana State. They see teaching as an "apprenticeship art," meaning that university professors can provide "tricks" to help them but should not try to infringe on their own artistry and inherent ability to teach. Coursework that provides these tricks is viewed favorably while core courses that teach subject knowledge are seen as irrelevant.

The results from analysis of the data support the premises of cognitive-structural theory. The participants in this study have well-developed schema of "teacher" and "teaching". These schema are resistant to change. The participants report the ability to assimilate new information to the schema they have, but they are unwilling to accommodate to schema that differ from their own. The participants report feeling comfortable with and trusting professors who support their existing schema. The participants tend to ignore information that competes with their existing ideas. The earlier

pilot study suggested that decisions to teach after K-12 were indicative of pre-service teachers who were more able to adapt to new ideas. This subsequent study seems to confirm this. Participants who reported deciding to teach after K-12 and who did not have other opportunities to develop conceptions about teaching (such as having a parent who taught) reported that prior conceptions had less of an impact on the teacher education curriculum. They also reported that professors would have a greater impact on their conceptions of teaching. These results are not counter-intuitive. People are more likely to accommodate to schema if there is little challenge from previously imbedded ones. The following excerpts are a comparison of the thoughts of those who decided to teach after K-12 and those who decided to teach during K-12:

*After:*

I think the *coursework* [emphasis added] here will have an impact on how I teach because here is where you are learning how to teach. I don't know how to teach yet. I know what I would like to teach, but I don't know how to teach. The coursework here will have a real big impact on how to teach. (#7, p. 5)  
If they [professors] were trying to tell me something different – I think I would go with what the professors told me. (#7, p. 5)

I think it makes you listen to the professors more. They have been out there and are still teaching. I didn't really understand [teaching] before because you were in grade school and didn't really understand what it was all about. (# 26, p. 6)

In our methods class a teacher would use our K-12 experience as an example of what we could do, should do, or shouldn't do. I came out of K-12 thinking teaching is one thing and now I see that teaching is different than what I thought. The conceptions are different, and you have to be open to [new conceptions]. (#28, p. 9)

My prior conceptions won't impact what I am going to take from college because I have an open mind. If you are not changing all the time, then you are kind of like dead in the water. (#8, p. 8)

When asked if her prior conceptions were more useful than coursework, Jade, a junior who decided at the age of twenty-four to become a teacher responded:

No, I don't think so. I don't remember very much of it [K-12 experience]. (# 4, p. 8)

*During:*

The responses cited above differ markedly from responses by participants who decided early to become teachers. Here are remarks from that set of respondents about their own preconceptions and their coursework at Montana State University.

They [prior conceptions] have taught me what I don't want to be. I remember sitting in a chair, with no noise, working solely on a piece of paper and knowing that is not the way I want my classroom to look. (# 19, p. 9)

[my professor's] philosophies were different than mine I will kind of come out of there with a bitter taste in my mouth...I would probably reject it because I have experienced it and I don't find a traditional approach effective. (#10, p. 7)

My experiences showed me what I want to do and do not want to do. Here I am learning stuff and I can kind of put all of that together and figure out how I want to be. It is not going to change the curriculum itself, but it is going to change what I do with the curriculum. The teachers do what they do – say the same thing year after year probably – I can take from that what I want. (# 2, p. 8)

I think the K-12 experience is going to be a major part of how I teach over my coursework. All the time you are in K-12 and then just four years in college – [college] is just a rundown to tell you what might happen and stuff like that. K-12 you have been in the classroom for thirteen years with different kids, seeing what is going on behind the teacher's back. I believe that is the best benefit is the K-12 experience. (# 36, p. 7)

When I was in elementary school there was some stuff that was stupid, shouldn't have been taught and is still being taught today. When I see something like that

being taught that I remember being taught to me, I can pretty much knock that off – that doesn't work for me as a teacher and it probably won't for a group of students. Just knowing what didn't work when I was a student is going to help me know what is not going to work when I am a teacher. (# 22, p. 9)

When I was in K-12, I learned by doing. The teachers always seemed to – if they lectured and a student didn't understand it, they would try another way to help or give them a different example. In methods I haven't had that. They talk about all these different ways we should teach to our kids or help our kids learn, yet they are not modeling it. (# 14, p. 11)

Let's say I was in fifth grade and I had a terrible science experience and then I get into my methods class and they are showing me all these interesting ways of making a science experience in fifth grade not terrible – I could tell that professor the ideas are great, and that I didn't have this when I was in fifth grade so keep doing this. If my methods class for science was terrible I could say this isn't helping me, this is what I had in fifth grade and I didn't like it so is there any way to bring in something else to teach me and my peers to make it more enjoyable? You can bring your experiences into your college classes. (# 32, p. 9)

I think part of the whole teaching experience is actual – it is not something you can be taught in a classroom. I don't think there is a right and a wrong way to teach. I think it is really hard for somebody to pin down on how you should teach. They give you great ideas and I love to use the ideas, but I will take the ideas that I want to use that go with my teaching style. I think that your K-12 is a huge part of your life that you have spent with teachers and you know what worked for you, but you also know what worked for the other students that didn't work for you. I think that actual experience is far greater. (# 31, p. 8)

Results from the instruments triangulated the conceptions the participants had about teaching. Responding to the Teaching Goals Inventory, only four participants felt that a teacher's focus should be discipline-specific knowledge. Most felt that the focus of a teacher should be to help students in work and career preparation, personal development, and liberal arts.

The age of the participants did not appear to influence attitudes and conceptions. This finding suggests that Psychosocial theory is not a useful explanation for how preconceptions impact teacher education.

Results from the Stages of Concern Questionnaire were inconclusive. It was expected that results from the SCQ would be indicative of certain attitudes or conceptions. However, results placed 29 of the participants at the Impact Stage of development. Sixteen of the 29 were beginning freshmen. The instrument measures three levels of teacher development, but in its present form it is not designed to measure the earliest stage of development proposed by Fuller (1969) and Fuller and Bown (1975). In order to capture the pre-concerns stage of development, the Stages of Concern Questionnaire needs to be revised. Until this is done, results obtained by using the instrument with beginning pre-service teachers cannot be considered accurate. Results from the SCQ do support Furlong and Maynard's (1995) assertion that teacher development should not be viewed as progression through discrete stages and concerns. Rather, pre-service teachers seem to swing between extremes before eventually achieving a more balanced perspective. Their development mirrors human development in general. Pre-service teachers move from concrete and undifferentiated ways of thinking to thinking that is more integrated, holistic, and flexible (p. 97). Findings from this research study suggest that Perry's model of intellectual and ethical development, Kohlberg's model of moral development, and Gilligan's "different voice" model which explain human development from simple thought structures to more complex thought structures may prove beneficial in explaining teacher development.

There was little noticeable difference between the junior level participants and the freshmen participants. The researcher feels this further supports the notion that standard

teacher education curriculums do little to challenge preexisting conceptions about teaching.

### Uncontrolled Factors Influencing Outcomes and Weaknesses in the Data

There were factors the researcher did not control for that should be noted. The researcher chose participants for interviewing based on the results of the written instruments. These instruments were administered prior to the start of the fall 2001 semester at Montana State University. The interviews could not be conducted until the students arrived on campus for fall semester. Because of this, some of the participants had started classes before interviews were conducted. All interviews were completed by the third week of classes, yet it is difficult to evaluate the impact of the few classes attended on interview results.

Several of the participants who were interviewed were parents. Several others had worked as aides or in daycare. The impact of these factors was not explored in this study.

The written instruments were presented to incoming freshmen during the new student orientations given in the summer of 2001. These orientations can be hectic for the students, since this is also the time for them to decide what courses to take. The researcher is not sure how careful the students were when filling out the written instruments. At times the students were rushed and struggled to complete the questionnaires.

One of the questions on the survey asked participants to list five characteristics of effective teachers. Trying to categorize their responses proved problematic. The

researcher had a difficult time categorizing responses as “affective” versus “cognitive.” The researcher finally decided to report only responses that included the term “knowledge.”

The benefit of having the participants report on their “block experience” was limited. The survey was given before the participants had any experience in the professional phase of the teacher education program.

Interviews were conducted in different areas around campus. Sometimes these areas were noisy and questions had to be repeated. The researcher used an interview protocol, but some of the participants were more open to discussing their feelings than were others. This led to conversational interviews with some of the participants.

Finally, there was difficulty in theoretically sampling equal numbers of participants who made the decision to teach before high school and participants who made that decision after high school. Most of the participants reported making the decision before graduating from high school.

#### Resolution of Contradictions, Inconsistencies, and Misleading Elements in the Findings

Inconsistencies and contradictions arose from the findings. Several of the participants refused to report their GPA. These individuals may have had substandard grades that they did not want to report or they may have had strong beliefs on the privacy of this type of data. The researcher chose to respect their wishes and did not pursue the issue.

On several occasions the researcher noticed that there were differences between answers given on the survey and answers given during the interviews. A few participants reported on the survey that they decided to teach at a time different from that they reported during the interview. The researcher used follow-up phone calls to clarify these inconsistencies. These clarifications were needed in three instances.

The researcher also noticed that some responses given during the interviews contradicted other responses. For example, a participant might claim that prior conceptions are "way more useful than coursework" and later expound on the benefits of coursework. The researcher was careful to try to clarify these inconsistencies during the interview but also used follow-up conversations when necessary.

### Chapter Summary

The purpose of this chapter was to report the findings and discoveries made as a result of the data collection. This report of results included a review of the statistical procedure used, analysis of the quantitative data collected from the questionnaires and survey, a review of the data from the qualitative interviews; and a combination matrix. The data presentation was followed by a discussion of meaning and a report of the weaknesses in the data. The data collected was used in conjunction with the literature to develop a grounded theory about how elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12

classrooms, impact their acceptance of the pre-block teacher education curriculum at Montana State University.

## CHAPTER FIVE

## CONCLUSIONS

Introduction

This study was designed to investigate the conceptions students have of learning to teach and how these conceptions influence the knowledge they acquire. It found that many elementary education majors decide on their profession at an early age. They come to college with conceptions that have been influenced by their own personal histories and by their experiences as children in K-12 classrooms – what Lortie (1975) calls the “apprenticeship of observation.” These prior conceptions interfere with education majors’ ability to learn from instruction. Many of the participants in this study were candid in reporting that prior conceptions developed as children in K-12 classrooms made it difficult for them to completely accept the curriculum at Montana State University. The participants reported confusion when professors described teaching situations that differed from what the participants expected. They would often resolve these conflicts in their mind by either accepting their prior experience over what they were being taught or assimilating the new knowledge into their preexisting ideas. Rarely would they report abandoning preexisting beliefs in favor of information provided from the curriculum. Some of the participants were willing to rationalize the veracity of their existing ideas by questioning the ability of professors who challenged their beliefs. Professors who reinforced their ideas were seen as competent while those who forced them to confront

the difficulties of the profession were deemed incompetent. Those who demonstrated the strongest commitment to their prior beliefs reported developing conceptions about teaching at an early age while watching other teachers.

This chapter will discuss the broader implications of the findings, provide recommendations for further research, discuss possible implementations of the findings, and propose a grounded theory to answer the major question: how do elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact their acceptance of the pre-block teacher education curriculum at Montana State University?

#### Discussion of Broader Implications and Implementation of Findings

Judging from previous literature and the interviews conducted for this study, it seems that some pre-service teachers view the course content in teacher education programs as unimportant. They feel that coursework is often unnecessary and that experience is all they need in order to be a good teacher. Faculty often become frustrated with pre-service teachers who fail to take the information provided in coursework seriously. In response, teacher educators at Montana State University have tried to use reflection to bridge the gap between theory and practice. Findings from this study have implications for teacher education programs that combine elements of the reflective practice model with standards-based models.

### Framework 1: Reflective Practice Model

Some teacher preparation programs are attempting to train professionals to train themselves. This method has become known as reflection. Reflection aims to help practitioners derive meaning from an event either before or after the event has occurred, and then use that new knowledge to form strategies for future problems. Reflection “entails the active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the consequences to which it leads” (Zeichner & Liston, 1987 p. 27). In reflection, consideration is given to any form of knowledge or belief and to the grounds for its belief (Adler, 1991; Calderhead, 1989; Cutler, Cook & Young, 1989; Farrah, 1988; Gilson, 1989).

Dewey (1933), who drew on the ideas of many earlier educators such as Plato, Aristotle, Confucius, Lao Tzu, Solomon, and Buddha (Houston, 1988), is acknowledged as a key developer in the twentieth century of the concept of reflection. As developed by Dewey, reflection is an active and deliberative cognitive process, involving sequences of interconnected ideas that take account of underlying beliefs and knowledge. Reflective thinking generally addresses practical problems, allowing for doubt and perplexity before possible solutions are reached.

Schon (1987) writes of reflection as intimately bound up with action. He holds that professionals, rather than attempting to apply scientific theories and concepts to practical situations, should learn to frame and reframe the often complex and ambiguous problems they are facing, test out various interpretations, and then modify their actions as a result. He talks about “reflection-on-action” and “reflection-in-action,” the latter

implying conscious thinking and modification while on the job. But both forms of reflection involve making reasoned judgments about preferable ways to act.

A wide variety of approaches has been employed in attempts to foster reflection in pre-service teachers. Case studies, ethnographic studies, microteaching, and writing tasks are often employed (Cutler, Cook & Young, 1989). The writing tasks frequently include keeping journals, as is the practice at Montana State University.

Proponents of reflection suggest that such description, analysis, explanation, and reflection bolster learning and teacher cognitive development. They claim that this method helps new teachers become more tolerant of confusion, more ethical in times of stress and conflict, and more caring. They also believe that teacher education programs should be based on the proposition that pre-service teachers are people who understand and can work effectively within contexts of change and uncertainty such as are found in the school environment. Furthermore, programs should assume that pre-service teachers are able to theorize logically and develop strategies to deal with the problems, and dilemmas that confront them daily in the teaching profession. As Darling-Hammond (2000) states, programs which see the pre-service teacher in this way

envision the professional teacher as one who learns from teaching rather than as one who has finished learning how to teach, and the job of teacher education as developing the capacity to enquire sensitively and systematically into the nature of learning and the effects of learning. This is an approach to knowledge production . . . that aims to empower them with greater understanding of complex situations rather than to control them with simplistic formulas or simplistic cookie-cutter routines for teaching. (p. 170)

### Framework 2: Standards-Based Model

The National Council for Accreditation of Teacher Education (NCATE) utilizes a framework based on standards of professional performance as outcome. This framework focuses on the professional performances that teacher candidates are expected to demonstrate, as well as on the ways candidates and teacher educators document, analyze, and evaluate these performances. The "idea of applying standards to teacher education is connected to larger debates about authentic assessments of teaching, about the shift from "inputs" (mastering individual teaching skills) to "outputs" (broad standards) as the basis of teacher education accreditation (particularly NCATE's new 2000 standards), and about accountability issues" (Madaus & O'Dwyer, 1999 p. 11).

The standards used by NCATE closely follow the ten "model standards" for teacher licensure from the Interstate New Teacher Assessment and Support Consortium (INTASC). NCATE's intent is to align its program standards with trends in state licensure practices, as well as to build on the performance-based accreditation system that NCATE is already developing (NCATE Website). The ten "model standards" for pre-service teachers are as follows:

#### Principle 1 - Understands Content

The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

#### Principle 2 - Understands Development

The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social, and personal development.

#### Principle 3 - Understands Difference

The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

#### Principle 4 - Designs Instructional Strategies

The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

#### Principle 5 - Manages and Motivates

The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

#### Principle 6 - Communicates

The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

#### Principle 7 - Plans and Integrates

The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

#### Principle 8 - Evaluates

The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

### Principle 9 - Reflects on Practice

The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

### Principle 10 - Participates in the Professional Community

The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

### Relationship Between This Study and Teacher Education Frameworks

There are four main points of contrast between the two frameworks and how they apply to this study's findings regarding prior conceptions of pre-service teachers. The first contrast is the importance each framework places on prior knowledge. In the reflective framework, prior knowledge is viewed as a necessary tool that pre-service teachers can use (Bullough, 1989, 1991; Marshall, 1990). Pre-service teachers are encouraged to engage their existing schema of "teacher" and "teaching" and to use those schema to inform their teaching. Standards-based models place little emphasis on prior conceptions. However, standards-based models do not actively discourage the use of prior conceptions. The second contrast involves the basic orientation of each framework. A reflective model tends to be affectively oriented. In this model, how the person "feels" is important. Meaning is constructed by the individual and is influenced by emotion. Standards-based models are more cognitively oriented. Subject content is seen as important and "fact" is seen in a more positivistic way. The third contrast is each

framework's assumptions about inherent ability. A reflective model assumes inherent ability on the part of the student. Pre-service teachers are seen as professional practitioners who can use their existing ingenuity and capabilities to solve problems and rise to new challenges (Tomlinson, Little, & Bower, 2000). Standards-based approaches make no assumption of inherent ability. In this model, the standards are met based on performance. The final contrast involves accountability. In a reflective model, accountability resides with the practitioner. Improvement occurs through active reflection on criteria established by the individual. In a standards-based approach, accountability resides with the external body that must determine if the standards were met.

From the interviews conducted for this study, several trends emerge. Interviewees see themselves as inherently capable. They also feel that the prior conceptions they have of "teacher" and "teaching" are accurate (even the 20 freshman students who had not yet taken a single college class felt this way). They are affectively oriented and see little use for much of the content coursework. One student's response echoed the feelings of many of her peers when she said: "...the first years are just kind of a joke with all the core classes that are required. I don't think they will really help me – geography, chemistry – I am not going to use anything that high level with elementary students." Interviewees also feel that they—not university faculty-- are the best judges of their own teaching abilities.

The following matrix shows the relationship between the findings of this study and the two teacher education models.

### Summary Matrix

|                                                                     | STANDARDS -BASED<br>MODEL | REFLECTIVE-<br>PRACTICE MODEL | PARTICIPANTS IN<br>MY STUDY |
|---------------------------------------------------------------------|---------------------------|-------------------------------|-----------------------------|
| Prior conceptions are<br>seen as a vehicle to<br>informed solutions | No                        | Yes                           | Yes                         |
| Orientation and<br>philosophy                                       | Cognitively oriented      | Affectively oriented          | Affectively oriented        |
| Inherent ability assumed                                            | No                        | Yes                           | Yes                         |
| Internal vs. external<br>accountability                             | External                  | Internal                      | Internal                    |

### How This Study Might Better Inform Standards-Based Teacher Education Programs

Some standards-based programs utilize reflective practice in instruction. This study suggests that care should be taken in utilizing this approach. In a study of American programs designed to encourage reflective approaches (Valli, 1992), "*the persistence and strength of participants' own prior conceptions of teaching* [italics added] proved a considerable barrier to learning" (p.34). For example, many students in the program Valli studied were seen to comply superficially with strategies used to encourage reflection, while their deep positions continued to create a fixed view of the nature of teaching that they had developed prior to entering the program. In a few cases, students' views of teaching were so deeply ingrained that they resisted going beyond basic descriptive reflection. In his course, Bird (1993) attempted to help education majors consider alternate conceptions about teaching. He found students highly resistant to replacing existing conceptions with new ones. Bird proposed that education majors' prior

conceptions provide them with what they perceive as reasonable alternatives to those presented in their coursework. Hollingsworth (1989) believes that the conceptions education majors have at the onset of preparation serve as filters for information provided in the coursework. These earlier findings and the findings from this study suggest that trying to build on pre-service teachers' existing schema through reflection may only serve to reinforce misconceptions about teaching. Instead of using pre-service teachers' existing schema, standards-based programs may want to directly challenge prior conceptions.

Teacher education programs employ reflective practices without a working theory of how prior conceptions may be impacting what pre-service teachers are willing to take from a program. Prior conceptions may hinder students' abilities to adapt to standards-based approaches currently in use at many universities. Reflective practices that invite students to recall existing schema of teaching may actually hinder student learning of necessary coursework.

#### Answer to the Question/ Developed Grounded Theory

Major Question: How do elementary education majors' prior conceptions about teaching, formed during their own experiences as children in K-12 classrooms, impact their acceptance of the pre-block teacher education curriculum at Montana State University?

Pre-service teachers arrive at Montana State University with well-developed conceptions of teaching and being a teacher. They develop these conceptions early in their lives, while they are in K-12 classrooms. These conceptions influence and at times limit what these students are willing to accept from the curriculum at Montana State University.

Pre-service teachers at Montana State University are sure they know what will work when teaching because they have seen it work while they were students. Conversely, they are sure about what won't work because they found it to be not beneficial when they themselves were students. While they report confidence in the accuracy of their conceptions about teaching and foresee an enjoyable future in education, they don't comprehend problems that many first year teachers encounter. Many of them are convinced that their preconceptions of teaching represent the "truth". They do not recognize that these conceptions were developed as children and need to change. Past conceptions of teaching and prior teachers influenced quite a number of the participants to enter the profession. Several of them see teaching as an easier job than most and welcome the limited challenge they believe it to be. They look forward to the "kids" and to their own personal interactions with them. They expect to use much of what they saw their own K-12 teachers use, and they trust these preconceptions about what constitutes effective teaching more than the coursework at Montana State. They see teaching as an "apprenticeship art," meaning that university professors can provide "tricks" to help them but should not try to infringe on their own artistry and inherent

ability to teach. Coursework that provides these tricks is viewed favorably while core courses that teach subject knowledge are seen as irrelevant.

The schema of "teaching" that these pre-service teachers bring with them are highly resistant to change and directly influence what students are willing to accept from the university curriculum. This may account for why faculty report unwillingness on the part of students to accept information presented in the coursework. This is also why students describe coursework as irrelevant in learning how to be a "teacher." The teacher preparation program at Montana State University does little to challenge existing schema and promote conceptual change in elementary education majors before they begin the paraprofessional phase of teacher training. Unfortunately, this leaves incorrect structures in the minds of pre-service teachers, which go unchallenged until teachers are placed in a classroom and forced to adapt to the realities of the profession.

#### Recommendations For Further Research

The education of pre-service teachers is a matter of serious concern. With recent calls to expand and improve the quality of education in teacher preparatory programs, it is essential that teacher educators better understand their students. This understanding must include knowledge of the impact students' prior conceptions have on learning. This study should be replicated in different forms and different locations. Quantitative measurements should be extracted from the findings and further qualitative research should explore new questions. A possible research scope might be:

|                      | Grade<br>School<br>Children | College<br>Freshmen | College<br>Sophomores | Paraprof.<br>Teachers | Student<br>Teachers | Beginning<br>Teachers | Experienced<br>Teachers |
|----------------------|-----------------------------|---------------------|-----------------------|-----------------------|---------------------|-----------------------|-------------------------|
| SCQ                  | XX                          | This study          | XX                    | This study            | XX                  | XX                    | XX                      |
| Survey               | XX                          | This study          | XX                    | This study            | XX                  | XX                    | XX                      |
| Interviews           | XX                          | This study          | XX                    | This study            | XX                  | XX                    | XX                      |
| Literature<br>Review | XX                          | This study          | XX                    | This study            | XX                  | XX                    | XX                      |

- XX – Yet to be researched.

### New Questions

Results from this study indicate that conceptions of teaching may be culturally defined. Vygotsky, a critical thinker in the area of cognition (Kozulin, 1990), recognized that schema are socially constructed through interactions with other people. This recognition has implications for education in light of the findings from this study. Additional research should explore the social construction of pre-service teacher schema. Finally, teacher educators need to know how they can help students overcome prior misconceptions of teaching and accommodate to new ideas. Further research should focus on how to produce conceptual change in elementary education majors.

### Implementation of Findings

Research into conceptual change supports the use of events that cause a discrepancy between expectation and reality (Piaget, 1974). The following proposal

draws upon that research and suggests one possible solution based upon findings from this study.

### Proposal

Four conditions need to be met before conceptual change can occur (Posner, 1982). The four conditions are (1) there must be dissatisfaction with existing conceptions, (2) new conceptions need to be intelligible, (3) new conceptions must appear plausible, (4) new conceptions must suggest the possibility of answering further questions.

In order to meet the first condition teacher educators need to create cognitive dissonance in the learners mind. Several techniques to create discord include (1) autobiographies, (2) small group discussions with other elementary education majors, (3) interviews with first-year teachers. Autobiographies (Koch, 1990) are used to help elementary education majors identify experiences that influence their initial attitudes toward teaching. Students write based upon the following prompt:

When you look at your education what do you see? Did you like it? Hate it? Did you ever even think about it? An autobiography is a personal description of your experiences in K-12 school. Frequently, we bring preconceived ideas and beliefs to our learning formed by our direct experiences. Please think about your own personal experiences in K-12 school and describe them. Finally, based solely on your own experience as a K-12 student complete this sentence: Teaching is...(p. 42).

Through this process the student recognizes that they have developed conceptions early in life. Cognitive dissonance occurs when discussion with other classmates forces the student to see that personal conceptions do not represent a consensus. Interviews with beginning teachers can also help elementary education majors develop dissatisfaction

with existing schema. Beginning teachers have fresh memories of the impact misconceptions have on teaching. Interviews with new teachers may help students confront the differences between their conceptions and reality.

The second condition of making new conceptions plausible for elementary education majors can be accomplished through instruction techniques. Teacher educators can help elementary education majors make sense of new information by asking questions designed to help students find their own answers (Mcdermott, 1999).

Making teacher educators aware of the need for conceptual change in elementary education majors is essential to meeting the third and fourth conditions. New conceptions of teaching presented through the curriculum will only seem plausible and reproducible if professors do not use techniques that reinforce prior misconceptions. Professors should be careful when utilizing reflection. This study suggests that sanctioning personal experience as "inherent ability" will make it harder for elementary education majors to accommodate to new ideas.

The researcher recommends incorporating these ideas into EDCI 102 (in-school experience) at Montana State University. The purpose of EDCI 102 is to help the student clarify career directions. The course provides elementary education majors an opportunity to observe teachers and discuss their experience in several seminars. Instructors of the course could utilize the techniques explained above to help the students confront prior conceptions of teaching. In this way the course would help elementary education majors accommodate new information provided to them later in the curriculum. EDCI 102 is located in the curriculum sequence as follows:

Seniors

STUDENT TEACHING

Juniors

BLOCK A

PARA I

BLOCK B

PARA II

Freshmen/  
Sophomore

PRE-PROFESSIONAL COURSES

CORE CURRICULUM

*EDCI 102*

There are existing programs that might prove beneficial in helping pre-service teachers focus more on subject content knowledge and the realities of teaching. These programs could be adapted to the teacher education program at Montana State University.

Japanese lesson study is a professional development process that some teachers are using to examine systematically their practice, with the goal of becoming more effective. In this process, teachers work collaboratively on a small number of "study lessons." Working on these study lessons involves planning, teaching, observing, and critiquing the lessons. The teachers select an overarching goal and a related research

question they want to explore. This research question then serves to guide their work on all the study lessons. While working on a study lesson, teachers jointly draw up a detailed plan which one of the teachers uses to teach the lesson in a real classroom (while other group members observe). The group then comes together to discuss their observations. Often, the group revises the lesson, and another teacher implements it in a second classroom, while group members again observe and then come together to discuss their observations. Finally, the teachers produce a report of what their study lessons have taught them.

PDS programs (Professional Development Schools) are another way to enhance teacher education. These programs have college faculty collaborate with teachers in K-12 schools on action research projects and on the preparation and supervision of pre-service teachers. The students in these teacher preparation programs benefit from courses that bring elementary classroom realities into the university curriculum.

Mentoring and induction programs could also be used to prepare experienced teachers as mentors who could provide in-classroom coaching for pre-service teachers and facilitate induction of graduates into teaching. Hollingsworth (1989) believed that current practices in teacher education do not force education majors to face the impact of their prior beliefs. She advocates pairing pre-service teachers with cooperating teachers whose ideas are somewhat incompatible with their own but who would also allow them to try out their own ideas in different contexts (p. 186).

The pre-service teachers in this study look forward to their limited practical experience. They see their time as an observer in the classroom to be key in tying their

prior conceptions to reality. However, as Lortie (1975), Furlong and Maynard (1995), Hollingsworth (1989), and the results of this study suggest, limited exposure to the act of teaching may reinforce unrealistic conceptions if students' prior misperceptions of teaching are not directly confronted.

### Chapter Summary

This study investigated the conceptions students have of teaching and how these influence the knowledge they acquire from teacher preparatory programs. It found that many elementary education majors choose teaching as their profession at an early age. They come to college with conceptions that have been influenced by their own personal histories, especially by their experiences as children in K-12 classrooms – what Lortie (1975) calls the “apprenticeship of observation.” These prior conceptions interfere with education majors' ability to learn from their coursework. This chapter discussed the broader implications of the findings, answered the transcendent question, provided recommendations for further research, and discussed possible implementations of the findings.

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APPENDICES

APPENDIX A  
INTERVIEW PROTOCOL

1. When did you decide to become a teacher?
2. What do you anticipate teaching to be like?
3. When did you first develop your conceptions about teaching?
4. What inspired you to become a teacher?
5. Was there a teacher(s) who influenced you to become a teacher? If yes, please explain. (What was the teacher like? What are several anecdotes that helped form your evaluation?)
6. What kind of teacher do you want to be?
7. What part of teaching do you find most attractive?
8. What kind of relationship do you want to have with the students in your class?
9. What part of the elementary education program here at MSU will best prepare you to be an effective teacher?
10. How important is it for a teacher to be able to control the student's behavior?
11. What ideas from your own experiences as a student in K-12 classrooms will you use when you teach?
12. What effect has/will your college coursework had/have on your conceptions about teaching?
13. What effect have/will your college instructors had/have on your conceptions about teaching?
14. Do you think your present conceptions about teaching are accurate? If so, what makes you think this way?

15. Do you think the ideas about teaching you developed through your years in K-12 classrooms were/will be more useful than your college coursework in learning how to be a teacher?
16. How have/will your prior conceptions about teaching, formed while you were a student in K-12 classrooms, impact the teacher education curriculum here at Montana State University?

APPENDIX B

STAGES OF CONCERN QUESTIONNAIRE

[1] Not concerned [2] A little concerned [3] Moderately concerned [4] Very concerned  
[5] Totally preoccupied

- ☐ 1. Having too many students in a class.
- ☐ 2. My ability to maintain the appropriate degree of class control.
- ☐ 3. Understanding what factors motivate students to study.
- ☐ 4. Doing well when a supervisor is present.
- ☐ 5. My ability to work with disruptive students.
- ☐ 6. Having too little control over the curriculum.
- ☐ 7. Getting students to behave.
- ☐ 8. Increasing students' feelings of accomplishment.
- ☐ 9. Obtaining a favorable evaluation of my teaching.
- ☐ 10. Whether I wish to remain in teaching.
- ☐ 11. Insufficient clerical help for teachers.
- ☐ 12. Too many noninstructional duties.
- ☐ 13. Meeting the needs of different kinds of students.
- ☐ 14. Not being able to cope with troublemakers.
- ☐ 15. Whether students respect me.
- ☐ 16. Recognizing the social and emotional needs of students.
- ☐ 17. Understanding the psychological and cultural differences that underlie the diverse backgrounds of students in my class.
- ☐ 18. The principal may think there is too much noise in my classroom.
- ☐ 19. Inadequate assistance from specialized teachers.
- ☐ 20. Lack of public support for schools resulting in inadequate resources.
- ☐ 21. Too many standards and regulations set for teachers.
- ☐ 22. Diagnosing student learning problems.
- ☐ 23. My peers may think that I am not doing an adequate job.
- ☐ 24. Having an embarrassing incident occur in my classroom for which I might be seen responsible.
- ☐ 25. The rigid instructional routine.
- ☐ 26. The inflexibility of the curriculum.
- ☐ 27. Having my inadequacies become known to other teachers.
- ☐ 28. Insufficient time for rest and class preparation.
- ☐ 29. Seeking alternative ways to ensure students learn subject matter.
- ☐ 30. Challenging unmotivated students.
- ☐ 31. Losing the respect of my peers.
- ☐ 32. Helping students to value learning.
- ☐ 33. Whether each student is reaching his or her maximum potential.
- ☐ 34. My ability to prepare adequate lesson plans.
- ☐ 35. Managing my time efficiently.
- ☐ 36. Adapting myself to the needs of different students.
- ☐ 37. Whether students can apply what they learn.
- ☐ 38. Wide range of student achievement in my class.
- ☐ 39. Not having sufficient time to think and plan.
- ☐ 40. Improving testing and grading procedures.
- ☐ 41. Understanding ways in which student health and nutrition problems might affect learning.
- ☐ 42. Guiding students toward intellectual and emotional growth.
- ☐ 43. Understanding why certain students make slow progress.
- ☐ 44. Lack of opportunity for professional guidance and growth.
- ☐ 45. Working with too many students each day.

APPENDIX C  
PRE-SERVICE TEACHER SURVEY

Gender: M    F

G.P.A. \_\_\_\_\_

Age: \_\_\_\_\_

How old were you when you decided to become a teacher?

What block experience have you had so far, if any?

1. What age level do you prefer to work with? Circle the grades that interest you most.

K      1      2      3      4      5      6      7      8

2. What are five characteristics of an effective teacher?

- A.
- B.
- C.
- D.
- E.

3. Which of these statements is most true for you? (Choose one):

- ☐ My college courses will be(have been) much more important than practical experience in learning to teach
- ☐ My college courses will be(have been) more important than practical experience in learning to teach
- ☐ My college courses will be(have been) equally important as practical experience in learning to teach
- ☐ My college courses will be(have been) less important than practical experience in learning to teach
- ☐ My college courses will be(have been) much less important than practical experience in learning to teach

4. On a scale from 10-100, what proportion of the skills needed to be a teacher do you feel you already possess?

10%    20%    30%    40%    50%    60%    70%    80%    90%    100%

APPENDIX D

CONSENT FOR PARTICIPATION IN EDUCATIONAL RESEARCH

I consent to participating in research entitled:

How Elementary Education Majors' Prior Conceptions about Teaching Formed During Their Own Experiences as Children in K-12 Classrooms Impact Their Acceptance of the Pre-Block Teacher Education Curriculum at Montana State University.

John Anselmi (principal investigator) has explained the purpose of the study, the procedures to be followed, and the expected duration of my participation.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Further, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without any prejudice to me. The information obtained from me will remain anonymous unless I specifically agree otherwise by placing my initials here \_\_\_\_\_.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily.

Printed Name: \_\_\_\_\_

Phone number where you can be reached: \_\_\_\_\_

Date: \_\_\_\_\_

Signed: \_\_\_\_\_

APPENDIX E:  
TEACHER GOALS INVENTORY

## Teaching Goals Inventory, Self-Scorable Version.

**Purpose:** The Teaching Goals Inventory (TGI) is a self-assessment of instructional goals. Its purpose is threefold: (1) to help college teachers become more aware of what they want to accomplish in individual courses; (2) to help faculty locate Classroom Assessment Techniques they can adapt and use to assess how well they are achieving their teaching and learning goals; and (3) to provide a starting point for discussions of teaching and learning goals among colleagues.

**Directions:** Please select ONE course you are currently teaching. Respond to each item on the inventory in relation to that particular course. (Your responses might be quite different if you were asked about your overall teaching and learning goals, for example, or the appropriate instructional goals for your discipline.)

Please print the title of the specific course you are focusing on:

Please rate the importance of each of the fifty-two goals listed below to the specific course you have selected. Assess each goal's importance to what you deliberately aim to have your students accomplish, rather than the goal's general worthiness or overall importance to your institution's mission. There are no "right" or "wrong" answers; only personally more or less accurate ones.

For each goal, circle only one response on the 1-to-5 rating scale. You may want to read quickly through all fifty-two goals before rating their relative importance.

In relation to the course you are focusing on, indicate whether each goal you rate is:

- |                    |                                                |
|--------------------|------------------------------------------------|
| (5) Essential      | a goal you always/nearly always try to achieve |
| (4) Very important | a goal you often try to achieve                |
| (3) Important      | a goal you sometimes try to achieve            |
| (2) Unimportant    | a goal you rarely try to achieve               |
| (1) Not applicable | a goal you never try to achieve                |

Rate the importance of each goal to what you aim to have students accomplish in your course.

|                                                                                                           | Essential | Very Important | Important | Unimportant | Not Applicable |
|-----------------------------------------------------------------------------------------------------------|-----------|----------------|-----------|-------------|----------------|
| 1. Develop ability to apply principles and generalizations already learned to new problems and situations | 5         | 4              | 3         | 2           | 1              |
| 2. Develop analytic skills                                                                                | 5         | 4              | 3         | 2           | 1              |
| 3. Develop problem-solving skills                                                                         | 5         | 4              | 3         | 2           | 1              |
| 4. Develop ability to draw reasonable inferences from observations                                        | 5         | 4              | 3         | 2           | 1              |
| 5. Develop ability to synthesize and integrate information and ideas                                      | 5         | 4              | 3         | 2           | 1              |
| 6. Develop ability to think holistically: to see the whole as well as the parts                           | 5         | 4              | 3         | 2           | 1              |
| 7. Develop ability to think creatively                                                                    | 5         | 4              | 3         | 2           | 1              |
| 8. Develop ability to distinguish between fact and opinion                                                | 5         | 4              | 3         | 2           | 1              |
| 9. Improve skill at paying attention                                                                      | 5         | 4              | 3         | 2           | 1              |
| 10. Develop ability to concentrate                                                                        | 5         | 4              | 3         | 2           | 1              |
| 11. Improve memory skills                                                                                 | 5         | 4              | 3         | 2           | 1              |
| 12. Improve listening skills                                                                              | 5         | 4              | 3         | 2           | 1              |
| 13. Improve speaking skills                                                                               | 5         | 4              | 3         | 2           | 1              |
| 14. Improve reading skills                                                                                | 5         | 4              | 3         | 2           | 1              |
| 15. Improve writing skills                                                                                | 5         | 4              | 3         | 2           | 1              |
| 16. Develop appropriate study skills, strategies, and habits                                              | 5         | 4              | 3         | 2           | 1              |
| 17. Improve mathematical skills                                                                           | 5         | 4              | 3         | 2           | 1              |
| 18. Learn terms and facts of this subject                                                                 | 5         | 4              | 3         | 2           | 1              |
| 19. Learn concepts and theories in this subject                                                           | 5         | 4              | 3         | 2           | 1              |
| 20. Develop skill in using materials, tools, and/or technology central to this subject                    | 5         | 4              | 3         | 2           | 1              |
| 21. Learn to understand perspectives and values of this subject                                           | 5         | 4              | 3         | 2           | 1              |

## Teaching Goals Inventory, Self-Scorable Version, Cont'd.

| <i>Rate the importance of each goal to what you aim to have students accomplish in your course.</i>                                     |  | <i>Essential</i> | <i>Very Important</i> | <i>Important</i> | <i>Unimportant</i> | <i>Not Applicable</i> |
|-----------------------------------------------------------------------------------------------------------------------------------------|--|------------------|-----------------------|------------------|--------------------|-----------------------|
| 22. Prepare for transfer or graduate study                                                                                              |  | 5                | 4                     | 3                | 2                  | 1                     |
| 23. Learn techniques and methods used to gain new knowledge in this subject                                                             |  | 5                | 4                     | 3                | 2                  | 1                     |
| 24. Learn to evaluate methods and materials in this subject                                                                             |  | 5                | 4                     | 3                | 2                  | 1                     |
| 25. Learn to appreciate important contributions to this subject                                                                         |  | 5                | 4                     | 3                | 2                  | 1                     |
| 26. Develop an appreciation of the liberal arts and sciences                                                                            |  | 5                | 4                     | 3                | 2                  | 1                     |
| 27. Develop an openness to new ideas                                                                                                    |  | 5                | 4                     | 3                | 2                  | 1                     |
| 28. Develop an informed concern about contemporary social issues                                                                        |  | 5                | 4                     | 3                | 2                  | 1                     |
| 29. Develop a commitment to exercise the rights and responsibilities of citizenship                                                     |  | 5                | 4                     | 3                | 2                  | 1                     |
| 30. Develop a lifelong love of learning                                                                                                 |  | 5                | 4                     | 3                | 2                  | 1                     |
| 31. Develop aesthetic appreciations                                                                                                     |  | 5                | 4                     | 3                | 2                  | 1                     |
| 32. Develop an informed historical perspective                                                                                          |  | 5                | 4                     | 3                | 2                  | 1                     |
| 33. Develop an informed understanding of the role of science and technology                                                             |  | 5                | 4                     | 3                | 2                  | 1                     |
| 34. Develop an informed appreciation of other cultures                                                                                  |  | 5                | 4                     | 3                | 2                  | 1                     |
| 35. Develop capacity to make informed ethical choices                                                                                   |  | 5                | 4                     | 3                | 2                  | 1                     |
| 36. Develop ability to work productively with others                                                                                    |  | 5                | 4                     | 3                | 2                  | 1                     |
| 37. Develop management skills                                                                                                           |  | 5                | 4                     | 3                | 2                  | 1                     |
| 38. Develop leadership skills                                                                                                           |  | 5                | 4                     | 3                | 2                  | 1                     |
| 39. Develop a commitment to accurate work                                                                                               |  | 5                | 4                     | 3                | 2                  | 1                     |
| 40. Improve ability to follow directions, instructions, and plans                                                                       |  | 5                | 4                     | 3                | 2                  | 1                     |
| 41. Improve ability to organize and use time effectively                                                                                |  | 5                | 4                     | 3                | 2                  | 1                     |
| 42. Develop a commitment to personal achievement                                                                                        |  | 5                | 4                     | 3                | 2                  | 1                     |
| 43. Develop ability to perform skillfully                                                                                               |  | 5                | 4                     | 3                | 2                  | 1                     |
| 44. Cultivate a sense of responsibility for one's own behavior                                                                          |  | 5                | 4                     | 3                | 2                  | 1                     |
| 45. Improve self-esteem/self-confidence                                                                                                 |  | 5                | 4                     | 3                | 2                  | 1                     |
| 46. Develop a commitment to one's own values                                                                                            |  | 5                | 4                     | 3                | 2                  | 1                     |
| 47. Develop respect for others                                                                                                          |  | 5                | 4                     | 3                | 2                  | 1                     |
| 48. Cultivate emotional health and well-being                                                                                           |  | 5                | 4                     | 3                | 2                  | 1                     |
| 49. Cultivate an active commitment to honesty                                                                                           |  | 5                | 4                     | 3                | 2                  | 1                     |
| 50. Develop capacity to think for one's self                                                                                            |  | 5                | 4                     | 3                | 2                  | 1                     |
| 51. Develop capacity to make wise decisions                                                                                             |  | 5                | 4                     | 3                | 2                  | 1                     |
| 52. In general, how do you see your primary role as a teacher?<br>(Although more than one statement may apply, please circle only one.) |  |                  |                       |                  |                    |                       |
| 1 Teaching students facts and principles of the subject matter                                                                          |  |                  |                       |                  |                    |                       |
| 2 Providing a role model for students                                                                                                   |  |                  |                       |                  |                    |                       |
| 3 Helping students develop higher-order thinking skills                                                                                 |  |                  |                       |                  |                    |                       |
| 4 Preparing students for jobs/careers                                                                                                   |  |                  |                       |                  |                    |                       |
| 5 Fostering student development and personal growth                                                                                     |  |                  |                       |                  |                    |                       |
| 6 Helping students develop basic learning skills                                                                                        |  |                  |                       |                  |                    |                       |

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