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**Exploring the process of reflection used by preservice teachers:
A case study**

Stewart, Loraine Moses, Ed.D.

The University of North Carolina at Greensboro, 1991

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EXPLORING THE PROCESS OF REFLECTION
USED BY PRESERVICE TEACHERS:
A CASE STUDY

by

Lorraine Moses Stewart

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

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Approved by:



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APPROVAL PAGE

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The purposes of this study was to examine the process preservice teachers use when completing activities designed to promote reflection, and to identify whether their reflective processes differed. The subjects of the study were seven of 33 elementary education preservice students enrolled in a 15-week educational psychology course. A major objective of the course was to promote reflective thinking by providing opportunities for preservice teachers to be reflective while also learning about the psychology of learning.

Case study methodology was used to gather data on the participants. Reflective activities included Cruickshank's Reflective Teaching Lessons, Posner's Teacher Belief Inventory, reflective papers, journal entries, and an interview. Psychological and personal dimensions examined were temperament, learning style, and age. Data indicated that age did not appear to be a factor in students' approaches to reflective teaching and temperament and learning style, while related to reflection, are complex factors that do not yield simple relationships to reflective style. Regardless of the students' original reflective orientation, all students improved their level of reflection.

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CHAPTER I
OVERVIEW OF CASE STUDY PROJECT

Introduction

During the 1980's, the terms "reflection", "reflective", and "reflective teaching" became very popular in educational literature. Killion and Todnem (1991) defined reflection as "the practice or act of analyzing our actions, decisions, or products by focusing on our process of achieving them" (p. 15).

Schon (1983, 1987) described two types of reflection: reflection-on-action and reflection-in-action. Reflection-on-action was defined as thinking back on a situation or action after it has happened while reflection-in-action was defined as thinking about what is being done while doing it. Killion and Todnem (1991) identified a third type of reflection, reflection-for-action, as knowledge gained from using both reflection-on-action and reflection-in-action. This newly generated knowledge will assist in guiding future actions. These three types of reflection include all time designations: reflection-on-action, the past; reflection-in-action, the present; and reflection-for-action, the future.

Reflection as defined in this study is the process of students taking time after teaching a lesson or

participating in any educational activity, to think about what took place, why the events occurred in the manner in which they did, and what they would do differently if they were faced with the same situation again. It also refers to students reflecting on others' teaching and exploring their cognitive processes during and after completing given reflective activities.

Two approaches to teaching reflection have emerged in the last decade. One approach, developed by Cruickshank and his associates (1981) at The Ohio State University, is manifested as a technocratic approach. Their Reflective Teaching model consists of 36 Reflective Teaching Lessons designed to be taught by teacher education students in preservice classes. Students are divided into small groups of four to six. All teachers in each group are assigned identical lessons to prepare and teach to their assigned small group. After each lesson is taught, reflections regarding the lesson are shared, initially within each small group, then with the whole class.

The second approach to reflective teaching is based upon an inquiry orientation designed to provoke thought on the different elements that affect teaching and learning. A number of researchers have contributed to this approach; including Bliss and Bloom (1985), Korthagen (1985, 1988), Posner (1989), Schon (1983, 1987), and Zeichner and Liston (1987). Reflection is evoked by probing for information

regarding students' perceptions on teaching and learning. Goodenough (1981) called this their propriospect or personal outlook. These reflections are then examined in relation to their effect on instruction, and to the students' philosophy of education.

I wanted to better understand what each approach contributed to reflection. In this study, students were initially led through designed projects and lessons, including five of Cruickshank's Reflective Teaching Lessons. As the semester progressed, students were asked to complete inquiry-oriented activities and papers. This dual approach was used to encourage students to turn theory to practice and to provide an opportunity for me to examine how students reflected in inquiry-oriented activities. The various activities served as a vehicle for reflection. My emphasis was not on the activity conducted by the students, but the process they used in reflecting on the activity.

I believe that the way in which students approach reflective activities is not always conscious and that it is influenced by individual psychological and personal characteristics, such as temperament and learning style. Korthagen (1985) found that some students did not benefit from reflective teaching. It "...seems to be appropriate for those [students] who already have a certain reflective attitude, whereas, those who do not possess a reflective predisposition seem to benefit less" (p. 14).

Korthagen referred to students who already have a reflective attitude as having an internal orientation to learning. The students who prefer to have structure and guidance from books or a supervisor are considered to have an external orientation. He believed that students who have an external orientation to learning should be allowed to learn how to reflect gradually in order to make it more meaningful to them. Although he did study other factors that might be associated with the differences in learning orientations, he speculated that "these differences in learning orientations may be caused by the belief systems and implicit theories which students have about learning" (p. 42).

Korthagen's findings regarding internal and external orientations suggest that it may be fruitful to explore the relationship between psychological and personal characteristics and reflection. According to Golay (1982), temperament governs behavior relating to preferences, emotions, and abilities that predispose one to certain ways of thinking, understanding, and to certain wants, motives or values. Korthagen's speculation regarding the relationship between learning orientation and belief systems suggest another avenue for exploration.

Belief systems is defined, following Goodenough (1963), as a set of statements or beliefs taken as truth and pertaining to the same domain; in this case, the domain of

teaching and learning. As I examine the processes that students use in reflective teaching activities, I intend to investigate both notions, temperament controls behavior and diversity in belief systems generates differences in learning orientations.

Statement of the Problem and Purpose

A number of teacher education programs have explored different aspects of reflective teaching. Most have examined group effects; few have looked at how individual students respond to reflective teaching activities. Behavioristic approaches assume that reflective teaching can be taught to every student; the cognitive approaches assume that only some students think in this manner.

Korthagen (1988) interviewed teacher educators and "arrived at the hypothesis that teacher educators only understand the way reflective students learn, possibly because they themselves have a reflective style" (p. 45). This suggested two areas of further study: how nonreflective students learn, and how nonreflective teachers perceive reflective learners. One of the purposes of this study was to identify preservice teachers who were more and less reflective in an attempt to discover how their reflective processes might differ. The dual approach to reflective teaching activities permits more insight into the instructional implications for reflective teachers if, in

fact, differences in reflective styles exist. A second purpose of this study was to examine the process preservice teachers use when completing activities designed to promote reflection.

Richards et al. (1989) suggested that "there may be psychological and personal characteristics of prospective teachers that distinguish reflectors and non-reflectors" (p. 10). It is important for teacher educators who adopt a reflective teaching activity approach to instruction to be able to recognize students at both ends of the reflective spectrum. Noffke and Brennan (1988) as well as Richards et al. (1989) believed the reflector needs to be more clearly identified if teachers want to teach all students to be reflective.

Korthagen and Verkuyl (1987), and Richards et al. (1989) suggested that prospective teachers differ in their willingness and abilities to reflect about teaching. Some students seem to have a natural ability to examine and critically question themselves and their teaching while others struggle with this process. "Clearly, in order to understand why some students can reflect, or learn to reflect, while others do not, it is time to study psychological and personal characteristics of the reflector" (Richards et al., 1987, p. 6). Examining students who have different psychological and personal characteristics may also be helpful in distinguishing the ways or processes

students use while reflecting. Psychological and personal characteristics explored in this study included age, temperament, and learning style.

The issues in this study were as follows:

1. Do preservice teachers' have beliefs about teaching and learning? If so, how do their beliefs influence the way they reflect upon their teaching?

2. Does encouraging students to reflect on their teaching experiences enhance their ability to learn from their experiences? Do teacher directed questions influence reflective thinking in post situations, if so, how? (Post situations refer to students writing about what happened and why after completing a given activity.)

3. How does our encouragement of reflective thinking relate to students' natural pattern of thinking or reflecting? What happens when it is in opposition to their natural pattern?

4. How does writing reflective papers influence the manner in which students evaluate their teaching experiences and learn from them?

Significance of the Study

Reflective teaching is increasingly being proposed as an alternative to traditional teaching methods. Gore (1987) addressed three advantages of allowing reflective teaching

to serve as an alternative to traditional teaching experiences:

Educationally, preservice teachers can be better prepared for school-based experiences and for continuing professional growth. Practically, the approach is efficient and cheap. And ideologically, it has the potential to create the awareness central to any restructuring of the education system in line with a critical perspective. (p. 37)

Most of the research to date has focused on differences in the instructional activities designed to promote reflection. More attention needs to be given to differences in how students learn to be reflective and how their own psychological and personal characteristics influence reflectivity. The information in turn will yield insights about the effectiveness of reflective teaching among students and its appropriateness for all students.

This study will address some of the concerns raised by Korthagen and Verkuyl (1987) regarding why prospective teachers differ in their willingness and abilities to reflect about their teaching. Are there commonalities among students who seem to have a natural ability to reflect upon their teaching? Are there commonalities among those who struggle with this process?

Context of the Study

The students selected for the study were elementary education majors pursuing teacher certification. They were enrolled in PSS 430-01, Psychological Foundations of

Education (Educational Psychology), Fall semester, 1990. Educational Psychology was one of four courses that made up the First Professional Semester (FPS1). FPS1 was the first semester of the students last year in the program. The other courses in FPS1 included: Instructional Media for Children (PSS 346); Teaching Practices and Curriculum in Reading and Other Language Arts (PSS 443); and Teaching Practices and Curriculum in Social Studies, Mathematics, and Science (PSS 444). The classes met consecutively in seventy-five minute sessions per class twice a week. FPS1 immediately preceded student teaching, (Second Professional Semester). Approximately 100 students are enrolled in FPS1 each semester. Students were divided into smaller sections of approximately 35 per section for instruction and supervision.

FPS1 also included an internship that integrated field assignments from all four courses. Each of the four instructors teaching the other courses gave the students assignments to complete during their internship. The nature of the assignments varied with the FPS1 instructional team. A variety of public schools served as sites for the internships. Two students were usually assigned to each classroom. Dialogue journals served as the primary mode for students to record their reflections about their internship experiences.

Educational Psychology was a lecture-activity course that met twice a week for 75 minutes each class period. A major objective of the course was to promote reflective thinking by providing opportunities for preservice teachers to be reflective while also learning about the psychology of learning. The core curriculum of Educational Psychology addressed areas such as understanding students' development and personality, the psychology of teaching methods, classroom management, classroom motivation, and evaluation. (See Appendix I for course syllabus)

Research Assumptions

These ideas were accepted as given and were not investigated as part of this study:

1. Given assurance of anonymity, students would be open and honest when sharing their experiences and reflections in their reflective papers, journals, and interviews.
2. Experiences and thoughts shared would be viewed as exemplary of what is important to the students.
3. Repetitiveness of thoughts and reflections in a data source or between data sources would be seen as indicative of affirmed beliefs about the given concept.
4. Based upon past informal pilot studies, the activities used in the course were accepted as provocative of reflective thoughts.

5. All students would keep a journal and complete all assignments required in the course.

6. The length, content, and frequency of journal entries implied the student's sense of comfort with journal keeping.

Scope of the Study

The limitations within this study were:

1. The observations made were from the role of a limited participant observer in an elementary education course.

2. The researcher served as both instructor and researcher for the course.

3. The data sources were all gathered from assignments completed in a single class that shared an internship experience with three other classes.

4. All the subjects' lessons were not observed or videotaped, therefore, reflective papers on the lessons represented what was taught and reflections regarding the lessons.

5. The subjects in the study were seniors completing their First Professional Semester in the elementary education program at the University of North Carolina at Greensboro.

6. Data was collected in one semester, Fall semester, 1990.

Definition of Terms

For purposes of interpretation in this study, the following definitions are assigned to the listed words:

1. Belief System - a set of statements or beliefs taken to be true and pertaining to the same domain.
2. Dialogue Journal - writings that serve as both a subjective and objective means of reconstructing and examining facts, interpretations, thoughts, motives, and feelings relating to the presentation of events and experiences.
3. Reflective Teaching - the conceptualization of a student stepping away from a situation or experience, looking back at it, and examining it as a means of better understanding his actions and experiences.
4. Temperament - preferences, emotions, and abilities that predispose one to certain ways of thinking, understanding, and to certain wants, motives or values.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

The concept of reflective teaching has been popularized in educational research during the past decade; yet, little research has been done on the appropriateness of reflective teaching for all students. This study will investigate how preservice teachers with diverse outlooks respond to the process of reflective teaching. In this chapter, literature that relates to reflective teaching is reviewed by presenting a brief overview of the origin of reflective teaching, and recent studies that have been conducted with preservice teachers and student teachers in order to promote reflective thought. The literature also addresses factors that may influence a student's receptivity to reflective teaching; namely temperament type and learning style, and journal keeping, an instrumental strategy often used in reflective teaching.

Origin of Reflection and Reflective Teaching

The terms reflection and reflective teaching are used in many different ways. However, this is not a new concept. Its origin extends back to Dewey (1904). Dewey's emphasis was on a more conceptual view of reflection and teaching because he feared that if too much emphasis was placed on a

mechanical orientation in the preparation of teachers, the opportunities for personal growth would be lost.

Dewey's perspective of education exemplified his participation in the Progressive Education movement that took place at the turn of the century. Progressive Education developed as a protest against perennialists' traditional perspectives of education. Perennialism was a very conservative philosophy that dominated American education until the late 19th century. It emphasized a curriculum that included the three R's (reading, writing, and arithmetic), moral and religious training at the elementary level, and subjects such as Latin, Greek, grammar, and geometry at the secondary level. Progressivists thought replaced the traditional curriculum with the skills they believed to be important for democratic living, problem-solving methods, scientific inquiry, cooperative learning experiences and self-discipline (Ornstein & Hunkins, 1988). Sharing the beliefs of the Progressive Education movement, Dewey placed emphasis on how to think, instead of what to think. Dewey and other progressivist thinkers believed that books and subject matter were part of the learning process instead of sources of ultimate knowledge, and teachers were leaders instead of strictly authority figures.

Dewey (1933) defined reflection as "an integration of attitudes and skills in the methods of inquiry" (p. 6), and

stated "to reflect is to look back on what has been done to extract meanings which are the capital stock for dealing with further experience" (p. 87). Dewey (1933) added, "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the farther conclusions to which it tends, constitutes reflective thought" (p. 6). For Dewey, reflective thinking meant "turning a subject over in the mind and giving it serious and consecutive consideration" (Dewey, 1933, p. 3).

Dewey (1933) also believed that reflective actions were preceded by an attitude of open-mindedness, responsibility, and wholeheartedness. Open-mindedness referred to an "active desire to listen to more sides than one; to give heed to the facts from whatever source they come; to give full attention to alternative possibilities; and to recognize the possibility of error even in beliefs that are dearest to us" (p. 29). Responsibility meant being mindful and alert of consequences that could arise as a result of your actions. Responsibility also referred to asking and seeking an answer to the question, "Why am I doing what I am doing?". Wholeheartedness referred to allowing open-mindedness and responsibility to be the main components of a reflective teacher's life.

Characteristics of Reflective Teachers

It is important to examine the characteristics of a reflective teacher because I believe that a person who values reflecting on his or her own teaching will also teach these skills, either overtly or covertly. Vedder (1988) stated, " an education programme which does not equip its student teachers with reflective skills allows teachers to run the risk of passively assuming the established patterns of the school and society and thus stagnating" (p. 13). The following researchers present characteristics that reflective teachers possess as well as skills they deem important to teach.

Based upon Dewey's (1933) belief that reflective actions are preceded by an attitude of open-mindedness, responsibility, and wholeheartedness, Grant and Zeichner (1981) elaborated on specific characteristics of a reflective teacher as they relate to each attitude, respectively. They stated, reflective teachers exhibit the following behaviors:

1. They keep an open mind regarding the content, methods and procedures used in the classroom by constantly reevaluating their usefulness and appropriateness for the students enrolled and the present situation.

2. They stay aware of their actions and the consequences that may develop as a result of their actions. Their teaching behaviors are not dictated by what is easy,

but what is most appropriate for meeting the needs of their students.

3. Their teaching philosophy and behavior is constantly dictated by their open-mindedness and responsibility. They are dedicated and committed to learning about, appreciating, accepting, and teaching all students.

Several characteristics of reflective teachers are also expressed by other researchers. Smyth (1984) expressed that reflective teachers actively generate thoughts and critically monitor thought processes. They also use problem solving techniques as a means to teaching and establishing methods of inquiry and analysis of instructional reasoning and philosophies. According to Hunt (1976), reflective teachers are flexible and capable of making adjustments and adapting to new situations. Reflective teachers earnestly attempt to maintain control of their classrooms and their professional life (Schon, 1983; Wildman & Niles, 1987).

Contemporary Definitions of Reflection and Reflective Teaching

The growing number of recent studies on reflective teaching imply a return to the beliefs of Dewey for the same reasons the Progressive Education movement surfaced initially--discontent with the traditional curriculum focus.

Reflective teaching has become a common theme for different alternatives to the traditional model of teacher

education. Alternatives that use reflective teaching are grounded in a belief that students should be active participants in the learning process rather than passive recipients. Each identifies reflective teaching as the means to achieve that goal. The language used to describe reflective teaching, however, suggests that there may be other values that separate the reflective approaches. Huebner's curricular languages are a helpful model for sorting out the confusion in definitions of reflective teaching. Huebner's model will be used as an organizer for presenting the review of literature.

Huebner (1975) identified five value frameworks that shape curriculum language: technical, political, scientific, esthetic, and ethical values. These value frameworks serve as reflections of the curriculum and guide the educational activities that are carried out in the classroom. The technical value system is the most dominant in current curricular theory. It approaches an economic model with a means-end rationality. Ends are stated as behavioral objectives. Specified activities, attitudes, and skills become the means to reach desired ends. Evaluation is considered a type of quality control.

Political valuing in curricular thinking is usually covert instead of overt. This value category is present because the educator has a position of power and control. Educational activity is valued by the educator for the

support or respect that it brings him or her, in the form of power and control.

Scientific activity is that activity that produces new knowledge with an empirical basis. Scientific valuing seeks to maximize the attainment of information or knowledge for the educator. This is achieved through scientific inquiry such as action research or controlled experimental design.

Esthetic valuing of educational activity is often ignored in American schools. These activities are viewed as having symbolic and esthetic meanings. There are at least three dimensions of esthetics valuing. The first is the element of psychic distance where the esthetic object is removed from the world of use having no functional or instrumental significance. Wholeness and design form the second dimension. Educational activity is valued by its sense of wholeness, balance, design, and integrity. The third dimension is symbolic meaning. Esthetic objects are symbolic of mankind's meanings, and can be valued by the meanings they reveal and by their truth.

Ethical values focus on the educational act. The student is valued by the educator as a fellow human being who is to be accepted. Educational activity is primarily viewed as an encounter between people--student and teacher, student and student, and student and community.

Huebner's (1975) model of curriculum language is built upon the notion that educational activities express the

value or emphasis of the curriculum language. It is important to note that there is no hierarchical structure to Huebner's framework of curriculum language; none are judged to be better than the others, just different.

Recent Studies on Reflective Teaching

Recent research on reflective teaching has taken many different directions. Stout (1989) asked elementary school teachers to recall the extent to which they used reflective thinking and teaching skills during their student teaching. Schon (1983, 1987) defined what it means to be a reflective practitioner and how we educate people to become reflective practitioners. Kirby (1988) developed a 15-item objective instrument, the Reflective Teaching Instrument, to assess teacher's perceived engagement in reflective practice.

Because I am interested in what we know about reflective thinking and reflective teaching in undergraduate teacher education programs, the studies reviewed in this chapter are limited to those that meet two criteria: (1) teacher education program models or courses that primarily emphasize promoting and developing reflective thinking and reflective teachers; (2) and research conducted with preservice teachers, including student teachers.

Hursh's (1988) ethnographic study on understanding if and how preservice teachers become more reflective discovered that students' became more reflective, but due to

their different perspectives took different routes towards reflectivity. He concluded that, "if preservice teachers fail to become reflective, it is not necessarily that they cannot become so, but that the program may not be adequately organized to promote the process" (p. 25). It is important, therefore, to examine how programs designed to promote reflective teaching have been organized. Program models of reflective teaching are reviewed first and then examined in light of Huebner's curriculum language model.

Program Models of Reflective Teaching

Bliss and Bloom - Stanford Teacher Education Program (STEP) (1985). The Stanford Teacher Education Program (STEP) is based on the belief that reflective teachers: 1) form meaningful educational purposes to guide the way in which they make everyday classroom decisions; 2) think about and hypothesize about potential long-term consequences of their actions in the classroom; 3) respect accepted educational procedures and evaluate their appropriateness based upon their effectiveness in realizing educational purposes; 4) remain open to new ideas; and 5) stay abreast of traditional and new methods.

This model represented the merger of the traditional STEP summer experiences and the Upward Bound Program. The merger took place in order to provide student teachers with daily opportunities to apply and reflect on theories during their course work and clinical experiences. The most

important component of STEP is its "integration of educational theory and classroom practice that enables student teachers to think critically about the purposes of schooling and their objectives as educators" (p. 77). The summer component of STEP emphasized reflective teaching through three approaches: a six-week clinical experience that consists of observing and teaching in the Upward Bound Program; an educational theories course; and daily summary sessions that help students connect theory and practice through discussions about teaching strategies, applying theories, and planning. The summary sessions appear to encourage students to become better planners.

Florida PROTEACH Program. PROTEACH is a 5-year teacher education program that enables students to earn a degree in elementary education, special education, or secondary education. These three programs are distinctly different from one another; even though they share the same guiding principles, a number of common courses, and some of the same faculty (Ross & Krogh, 1988). PROTEACH was developed as a college-wide program, rather than just as an education department program.

The primary goal of the elementary PROTEACH program is to develop critical reflection. In relation to elementary PROTEACH, Ross defined reflection as "a way of thinking about educational matters that involves the ability to make rational choices and to assume responsibility for those

choices" (p. 22). Ross (1989) focused on critical reflection in teaching an introductory education course titled Research in Elementary Education. The course covered several topic areas related to educational research. These topics were addressed through strategies for fostering the development of reflections by communicating that knowledge is socially constructed, modeling reflection, and providing guided practice in reflective thinking and teaching."

The main source of data for Ross's study was theory-to-practice papers completed by the students and evaluated by the instructor. Each student was required to complete 10 papers, from which 134 were chosen for analysis by the instructor. The papers were analyzed by reading each 4 times, categorizing each by topic, rating each by assigning a level of reflection (low, moderate, and high), rereading each cluster of papers according to rating criteria and making necessary adjustments. A part of the analyzing process included searching for themes that organized ideas across students' papers.

The results showed that all of the students demonstrated a high level of reflection at some point in time. Yet, less than one-fourth of the students demonstrated the desired level of reflection. The results also showed that the topic of the theory-to-practice papers seemed to influence the level of reflection demonstrated. Papers on problems, concerns, or limitations in teacher

effectiveness research and beliefs or experiences that confirm the truth of teacher effectiveness literature induced the highest percentage of level three reflections. Nevertheless, to the researchers' surprise, the degree of reflection exhibited in theory-to-practice papers did not increase as the semester progressed, even though students received practice and feedback.

Korthagen's ALACT Model. Korthagen (1988) presented a study that was conducted in the Mathematics Department of the Stichting Opleiding Leraren (SOL), Teachers' College in Utrecht, The Netherlands. It was a four and one-half year program for secondary mathematics teachers with a framework structured around mathematics and one other course, such as physics or geography. This program was also composed of the equivalent of one year of professional preparation which was spread across the entire program.

The program was based on the assumption that preservice teachers could not be taught to be prepared for every situation that may arise in the teaching profession, but they could be taught to reflect on their experiences and to become more aware of their professional development. Korthagen implied that this could take place through reflections.

In this study, students were taught to reflect by following a five stage model called the ALACT-model. ALACT is an acronym for the five phases of the model: (1) action,

(2) looking back on the action, (3) awareness of essential aspects, (4) creating alternative methods of action, and (5) trial. The main and final goal of the SOL program was to help the preservice teachers learn to go through the steps of the model, without the help of the supervising teacher, and "to make use of internal feedback on his or her own experience and external feedback from pupils or other teachers, adjusting where necessary their own subjective view of reality" (p. 37).

During their first year in the program, students were involved in a practicum where they were taught to reflect on mathematics as well as their "feelings, attitudes, and personal goals" (p. 38) through role-play and participation in discussions and games. An underlying goal of this practicum was to teach students how to reflect prior to their encountering any field experiences.

The students' first field experience took place at the end of their second year when they were assigned to teach a group of approximately eight 11-12 year old children for one to one and one-half hours a week without the cooperating teacher being present. During this phase, faculty at the teacher education institute supervised the students by reviewing the entries in their logbooks and conducting sessions where they reviewed logbooks and heard oral reports from the student teachers. Since emphasis was placed on the belief that when students are given a high

level of responsibility and freedom it helps them find their own personal style of teaching and stimulates reflections on their personal style and growth, no visits were made to the students' classes by the university supervisors. During the third and fourth years in the program, the student teachers worked with a class of secondary students under the supervision of a cooperating teacher who had been trained on using the ALACT-model.

The program was evaluated in several steps. In the first step, a questionnaire was sent to 116 former SOL mathematics students and to 13 students who were approaching graduation. The two most important questions on the questionnaire were: (1) What have you learned during your teacher preparation? (2) What do you think was missing in your teacher preparation?

As a result of this phase of the study, it became apparent that some students can acquire the ability to reflect and some need more direction for their teaching practice. In order to study the difference between these two groups more thoroughly, another study was done. Five former students from both groups were interviewed.

The conclusion drawn from these interviews was that student teachers differ in their willingness and ability to learn through reflection. The results implied that "the program seems to be appropriate for those who already have a certain reflective attitude, whereas, those who do not

possess a reflective predisposition seem to benefit less" (Korthagen, 1985, p. 14). Korthagen referred to students who already have a reflective attitude as having an internal orientation to learning. The students who prefer to have structure and guidance from books or a supervisor are considered to have an external orientation. He believes that students who have an external orientation to learning should be allowed to learn how to reflect gradually in order to make it more meaningful to them. The exact reason for the differences in learning orientations was not explored but it was stated that, "these differences in learning orientations may be caused by the belief systems and implicit theories which students have about learning" (p. 42).

Korthagen questioned whether reflective teaching is appropriate for all students. A second follow-up study (Korthagen and Verkuyl, 1987) used longitudinal data to investigate how individual students develop during their preparation program. Eighteen prospective mathematics teachers in the SOL program were the participants in this study. Two questionnaires were developed and administered to the students to determine their level of internal or external learning orientation based upon their beliefs and goals. The first questionnaire was completed by third year students who were in the beginning stage of training. The

second questionnaire was completed by fourth year students who participated in field experiences.

Students and teachers in the program were interviewed during the study. Students were interviewed twice a year, with the first interview taking place during the first few weeks of the study. These interviews indicated differences in students as to their preferences and beliefs toward learning. Teachers were interviewed to find out about their beliefs and goals and how they implemented them in the program, as well as what they thought the results were.

During the study, eight students dropped out and ten stayed. The reason for this is uncertain, but Korthagen and Verkuyl found that many of the students who dropped out felt that there was a clash between their beliefs and underlying learning conceptions and those of the teachers directing the program. This study did not seem to support any clear theories about differences in learning orientations.

Zeichner and Liston - Teaching Students to Reflect (1987). Zeichner and Liston (1987) completed a study on elementary student teachers at the University of Wisconsin, Madison. The program was predominantly concerned with the growth and development of the student teachers in teaching. The central goal of the reflective teaching curriculum based program was designed to stimulate reflection about teaching and its context at Van Manen's three levels of reflectivity: 1) technical rationality, 2) practical action, and 3)

critical reflection. Yet, it emphasized encouraging reflection that engaged educational and moral criteria.

"The program literature defines a reflective teacher as one who assesses the origins, purposes, and consequences of his or her work at all three levels" (p. 25).

The elementary student teaching program is the final stage of a four semester sequence of professional education courses in the areas of kindergarten, first through eighth grades, and bilingual education. The goal of the program was to "emphasize preparation of teachers who are willing and able to reflect on origins, purposes, and consequences of their actions; as well as on the material and ideological constraints and encouragements embedded in the classroom, school, and societal contexts in which they work" (p. 23).

This student teaching program is made of five curricula components; 1) teaching, 2) inquiry, 3) seminars, 4) journals, and 5) supervisory conference. During the semester of student teaching, the students spend four and one-half days a week in one or more public or private school classrooms and two hours a week in a required campus seminar. Students and teachers take part in the decision of placing students in the schools in an attempt to match a teacher and student with shared perspectives regarding teaching. Student teachers are expected to gradually take on more and more responsibility for the classroom as the semester progresses. The rate at which that this happens

varies among students teachers and is acceptable as long as they teach full-time for at least two weeks. The cooperating teacher, the student teacher, and the university supervisor work as a team when making decisions about the student taking on more responsibility for the classroom.

A graduate student in the Department of Curriculum and Instruction serves as the university supervisor who visits the student teachers at least six times during the semester. The visits consist of at least five observations and at least one follow-up conference.

The inquiry component of the program focuses on helping students become more aware and informed of diverse existing cultures of the environment in which they are working, including the classroom, school, and community. During this component, students complete at least three observations outside of their classroom and at least one of the following: an action project, an ethnographic study, or a curriculum analysis project. The action project involves the students in exploring, planning, acting, observing, and reflecting. The projects designed by students are in written form and are shared in the seminar groups. The ethnographic studies can be conducted in the classrooms, schools, and school communities in which the student teachers are working. The curriculum analysis project includes analysis of school curricula and processes of

curriculum development in settings where the student teachers work.

The third component of the program is seminars taught by the supervisor on relevant issues regarding classroom experiences. These seminars are designed to help students "broaden perspectives on teaching, consider the rationales underlying alternative possibilities for classrooms and pedagogy, and assess their own developing perspectives toward teaching" (p. 32).

Journals are the fourth component. They are kept according to specific guidelines provided by the supervisor. These journals serve as documentation for student's development over the course of the semester. The supervisor reads them regularly and responds. The journals serve as an essential element in the supervisory process. It has a two-fold purpose. First, it provides the supervisor with information about the students' classroom, school, and community encounters as well as what the students think about their teaching and development as teachers. Second, the journals provide student teachers with a means of reflecting on their development as teachers and on the experiences they encounter during the program.

The final component of the program is supervisory conferences. These conferences take place after each formal observation. They allow for discussion on specific issues, actions, and settings. The conferences focus on classroom

observations and general development of student teachers' perspectives during the semester. Zeichner and Liston (1987) concluded that some of their goals were achieved rather well, some were only partially achieved, while others appeared to be neglected in practice.

Courses Focusing on Reflective Teaching

Cruickshank's Reflective Teaching. Cruickshank (1985a) described Reflective Teaching as an opportunity for teachers to teach then reflect on their teaching experience. He believed that this method of teaching helps give prospective teachers a better outlook on their role as teachers by helping them become more reflective on their teaching behavior and by helping them become more interested in improving themselves as prospective teachers.

Cruickshank et al. (1981a, 1981b) investigated Reflective Teaching within a general methods course for pre-service secondary school teachers at The Ohio State University. Fifty-five of the students were in sections that included six hours of Reflective Teaching. Students were divided into small groups of four to six people. Each person in a group was randomly assigned one of 36 preselected Reflective Teaching Lessons (RTL) to teach to the others in their group. The person teaching the lesson was considered the designated teacher. Designated teachers were instructed to provide 10-15 minutes of instruction, assess learner achievement and satisfaction, and lead a

brief discussion on reflections regarding their lesson. After all RTLs were taught, the entire class reconvened and participated in a discussion of reflections regarding the lessons.

The remaining forty-six students constituted the control group. They participated in six hours of group discussions on professionalism and teacher certification. A packet of curriculum materials relating to teaching during the formative years of education in America provided the background reading for these discussions (Cruickshank, 1981a, 1981b). These materials were examined by students, and discussed in small groups followed by a whole class discussion.

Cruickshank et al. (1985a) considered their model to be a form of peer teaching that allows the teacher to go beyond role-playing to role-taking appropriate for both pre-service and inservice teachers. They found that Reflective Teaching participants produced proportionally more analytical statements about teaching and about learning than the control group members did. Reflective Teaching participants were also less frightened, less anxious, and more confident about commencing student teaching than were control group members.

Ferguson - Secondary Social Studies Methods Course (1989). This study focused on a secondary methods course at the University of Alabama where an attempt was made to help

prospective teachers turn theory into practice through reflective teaching. Ferguson expressed the importance of recognizing the previous approach of connecting theory with practice was based upon a technical orientation that needs to be transformed to a reflective orientation. The course was composed of three parts: the methods classroom, experiences in the schools, and follow-up activities at the university.

While in the methods class, students initially completed a questionnaire that assessed their commitment to disseminating cultural heritage, teaching social sciences, and promoting reflective thinking. Students also completed a 20-item semantic differential scale on teaching social studies that consisted of opposite pairs of words, such as exciting-dull and hard-easy. Students spent one week reading and discussing selected articles about contrasting views of teaching social studies as part of the classroom assignments. They also wrote papers summarizing and critiquing two methods of presentation of instructional theory by Joyce and Showers; generalization-based and jigsaw or cooperative team teaching. The instructor demonstrated the lesson emphasizing how the two instructional methods might be applicable to the classroom. Students discussed and wrote a paper assessing the lesson using criteria for both methods of instruction and reflected on the usefulness of the two approaches to their personal philosophies of

social studies. Afterwards, the students developed two generalization-based jigsaw lessons that were evaluated and returned with comments and suggestions for improvement.

During the second part of the course, students were matched according to their majors to work with master teachers in the local schools. Students were required to visit the school eight times; two observation visits, three visit for planning a lesson with the master teacher, two visits to actually teach a lesson, and the final visit to discuss the outcomes of the lesson. During the course evaluation, the majority of the students rated this component as the most rewarding aspect of the course because of the emphasis placed on the experience and reflective teaching.

The final part of the methods course took place back at the university. In regards to their practicum experiences, students had to submit a log on each of their visits to the local school, the lesson plans developed, and their planning and evaluation guide sheets. During this stage of the course, the students repeated completion of the questionnaires from the beginning of the course, compared the results of the two, and wrote a one-page statement on the practicum experience and its relation to their present philosophies. After reading these papers, the instructor held individual conferences with students to discuss practicum experiences. As a final aspect of the university

classroom component, a seminar was conducted where students discussed the value of generalization-based instruction and cooperative teams as they related to their goals and purposes.

During this course, a determination of the students' level of reflection was based upon Van Manen's (1977) three stages: technical rationality, practical action, and critical reflection. Based upon all sources of information gathered, all students were capable of functioning at the technical rationality level. Only a few functioned at the highest level of reflection, critical reflection. All students showed a greater preference for reflective inquiry than for cultural dissemination and social science traditions. The overall conclusion of the course was that it was successful in getting most students to Van Manen's second level of reflection.

Richards et al. Psychological and Personal Dimensions of Reflective Abilities (1989). Richards et al. (1989) defined reflecting about teaching as "the capability and willingness of prospective teachers to question and critically analyze their teaching and teaching experiences" (p. 3). Their belief is that prospective teachers differ in their willingness and abilities to reflect about teaching; some possess a natural ability to examine and question their teaching, some develop this ability over time with guidance and leadership, while some seem to continue to struggle with

this process by showing little evidence of reflective ability.

Their study was conducted with 16 elementary education majors enrolled in a reading/language arts course that was designated as an inquiry-oriented early field experience. The students conducted all course activities at an inner-city elementary school that they attended two mornings each week. Dialogue journals that were examined each week for evidence of reflective thinking were the primary mode of reflection. As a means of better understanding student differences based upon psychological and personal dimensions, the following characteristics were examined: (a) experience, (b) academic performance, (c) achievement need, (d) locus of control, (e) creative ability, and (f) personality.

At mid-semester, the 16 subjects were classified as either "reflective" or "nonreflective" based upon their journals and a series of interviews concerning strategies and methods of teaching. At the end of the semester, each journal was thoroughly examined and placed in one of three categories; having no or few reflective statements, exhibiting evidence that the student had learned to reflect, or entered class already knowing how to reflect. The journals were assigned a value of 1-3, respectively, to designate the quantity and quality of reflective statements. At the end of the semester, the students also responded to:

Rotter's Generalized Expectancies for Internal Versus External Control of Reinforcement; the Torrance Verbal Test of Creative Thinking; the California Psychological Inventory; and the Myers-Briggs Type Indicator. Information regarding each student's prior professional experiences and grade point average was also examined.

The results of this study implied that psychological and personal characteristics such as self-confidence, academic ability, and prior experience may assist in describing reflectors (reflective thinkers). Internal locus of control was found to be a significant characteristic of reflective thinkers. Other characteristics that described reflectors in this study were: possess an internal locus of control; self-confident; curious; spontaneous; understanding and concerned about people; aware of personal and others' values; displays initiative; and are willing and able to adapt to new ideas, events, and situations.

The foregoing characteristics have been identified by Richards et al. (1989) as traits of reflective thinkers but they did not list traits for non-reflective thinkers. Nevertheless, Grant and Zeichner (1984) characterized non-reflective or unreflective teachers in the following manner:

Teachers who are unreflective about their work uncritically accept his everyday reality in schools and concentrate their efforts on finding the most effective and efficient means to achieve ends and to solve problems that have largely been defined for them by others. These teachers lose sight of the fact that their everyday reality is only one of many possible alternatives. They tend

to forget the purposes and ends toward which they are working. (p. 4)

Posner (1989) stated that "non reflective teachers rely on routine behavior and are guided by impulse, tradition, and authority than by reflection" (p. 21).

Reflective Teaching Viewed Through Huebner's Curriculum Languages

Huebner identified five curricular languages, -- scientific, esthetic, ethical, technical, and political, that are helpful in assessing the underlying values that influence classroom activities.

Dewey's theories are grounded in Huebner's scientific language as illustrated by Dewey's emphasis on process while focusing on concepts such as learning by doing, reflective action, and learning through experiences. The following sections identify where the studies previously reviewed fit in Huebner's curricular languages.

Scientific. Bliss and Bloom (1985), Ross (1989), and Zeichner and Liston (1987) draw from Dewey's (1933) belief that open-mindedness, responsibility, and wholeheartedness are prerequisites to reflective action. However, only Bliss and Bloom and Ross fit Huebner's scientific language. Bliss and Bloom followed Dewey by encouraging critical thinking and question asking, providing opportunities for students to apply and reflect on theories, and encouraging students to examine their own teaching.

Ross (1989) also speaks a more scientific language with her emphasis on students examining their own teaching through completion of theory-to-practice papers, which also promotes self-evaluation.

Richards et al.'s (1989) inquiry-oriented research does not claim a direct link to Dewey, but is in agreement with another aspect of Dewey's philosophy, the psychological and personal dimensions of an individual. Characteristics examined in this research included such things as experience, locus of control, personality type, and creative ability. Dewey (1954) stated, " the educational process has two sides - one psychological and one sociological - and that neither can be subordinated to the other, or neglected, without evil results following. Of these two sides, the psychological is the basis. The child's own instincts and powers furnish the material and give the starting point for all education" (p. 629). Richards et al. also encouraged students to critically analyze their own teaching.

Esthetic and Ethical. Zeichner and Liston (1987) draw from Dewey's (1933) belief that open-mindedness, responsibility, and wholeheartedness are prerequisites to reflective action. Their research represents a more esthetic and ethical emphasis. They emphasized: encourage students to assess their own perspectives toward teaching, work to increase students' cultural literacy, with emphasis on ethical, moral, and political aspects of teaching, and

have a general inquiry orientation. One could also agree that they include political language with their emphasis on political principles and their focus on teachers' collective influence.

Ferguson (1989) does not cite Dewey as an influence but his research, like Richard's et al. builds on beliefs held by Dewey. Ferguson's emphasis on critical analysis and discussing values addresses Dewey's notion that "active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further conclusions to which it tends, constitutes reflective thought" (p. 6). Like Zeichner and Liston, the core of Ferguson's research is a combination of esthetic and ethical languages. His research includes students assessing their commitment to disseminating cultural heritage, assessing lessons based upon usefulness to their individual philosophies of social studies, keeping a log, and participating in seminars where they discuss the value of activities completed as they relate to their goals.

Technical. Cruickshank (1987) draws on Dewey's belief that it is important to make teachers "thoughtful and alert students of education" (Dewey, 1904, p. 15). However, his Reflective Teaching departed from Dewey's scientific curriculum language. Cruickshank believed that it is possible for all participants involved in the activities to learn to become reflective teachers. He emphasized having

students deliberate on their actions and be open-minded, wholehearted, and intellectually responsible. These concepts were taken directly from Dewey (1933), but Cruickshank described them in a more technical language with prescribed lessons, limited amount of time to teach lessons, and evaluation through observing and measuring behavior and using learner satisfaction forms. This led Gore (1987) to refute Cruickshank's claim to draw from Dewey.

Gore (1987) questioned the degree of promoting reflective thinking that Cruickshank promotes with his model. The technical approach seems to run counter to the idea of reflection, but those who support Cruickshank's links to Dewey (Killen, 1989) do so because he leaves room for some student action. The lessons are prescribed and Cruickshank does give the students the information to teach, but he does not tell them how to teach the lessons. The student has to plan the presentation of the lesson with the goal of having participating students learn the content. More research is needed to discover how effective Cruickshank's model is in promoting reflection and whether there are differences in the nature of the reflections stimulated by a more technical approach.

Korthagen (1988) represents another technical approach to reflection, although interestingly, he draws on Zeichner who's language is ethical and esthetic. Korthagen has a prescribed model that students learn to go through without

assistance from the teacher. Unlike Cruickshank, however, Korthagen does not claim that everyone can learn to be reflective from this model. His subsequent research has focused on identifying characteristics of students who do not appear to benefit from the prescribed program. This implies a sense of quality control and a technocratic language.

None of the researcher's central language appear to be in the political language category.

Implications For Teacher Education Programs

Research results reveal that timing, means of application, and practice in the role of reflective teacher, influences teacher education programs. Korthagen (1985) expressed concern that students need to be taught reflective teaching before they start their field experiences. Schon (1983) stated, "Through reflection, he [the practitioner] can surface and criticize the tacit understandings that have grown up around the repetitive experiences of a specialized practice, and can make new sense of the situations of uncertainty or uniqueness which he may allow himself to experience" (p. 61). Cruickshank (1985b) stated, "in essence, reflective teaching is an effort to increase teacher wisdom by engaging preservice students in controlled, on-campus teaching where their behavior is observable and measurable and where their teaching can be

examined and thought about in ways that will enhance subsequent performance" (p. 97). Reflective Teaching appears to reduce anxiety and build confidence in students, and is particularly helpful prior to student teaching (Cruickshank, 1987).

Research to date has focused on where reflective teaching best fits in the preservice program and how to best present it. Little research has been done on whether all students can benefit from reflective teaching or on which instructional strategies best meet the needs of students not naturally inclined toward reflection. Richards et al. (1989) found that psychological and personal characteristics such as self-confidence, academic ability, and prior experience may be related to students' levels of reflectivity. Further research on the psychological and personal characteristics of students in relation to instructional strategy is needed.

Psychological and Personal Dimensions

Temperament and Learning Style

Dewey (1940) believed that the psychological aspect of the educational process is its foundation, although, the sociological side is not inferior to it. "The child's own instincts and powers furnish the material and give the starting point for all education....Without insight into the psychological structure and activities of the individual,

the educative process will, therefore, be haphazard and arbitrary" (p. 4). Dewey felt that education should begin with gaining knowledge about a child's "capabilities, interests, and habits" (p. 6). Richards et al. (1989), echoed this same thought years later; "we need to begin to appreciate the unique qualities and characteristics which make student teachers different from each other. Differences in psychological and personal dimensions may help explain why some novices are willing and able to analyze their teaching experiences while others exhibit little enthusiasm or ability for reflective thought" (p. 3).

Interest in examining the influence of the psychological dimensions of an individual peaked in the 1920's with Carl Jung's theory. He believed that the purpose of psychological topology is not to classify people into categories but to provide a means of assisting in the understanding of extreme variations of individual differences and understanding human psychology in general. Jung (1971) stated, "the topological system I have proposed in an attempt, grounded on practical experience, to provide an explanatory basis and theoretical framework for the boundless diversity that has hitherto prevailed in the formation of psychological concepts" (p. 555).

Jung was not the first to propose a type theory to explain individual differences in development. The ancients

used astrology to classify people by types and Hippocrates, The Greek father of medicine, developed a physiological type theory to represent the different body fluids or "humours", phlegmatic, sanguine, choleric, and melancholic, that influenced different personality traits.

Jung looked to mythology rather than to the stars or body fluids. He selected Apollo, Dionysus, Prometheus, and Epimetheus, Greek Gods chosen by Zeus to make man more like the gods, to represent the four basic temperaments that he found in individuals. "Myth has it that Apollo was commissioned to give man a sense of spirit, Dionysus to teach man joy, Prometheus to give man science, and Epimetheus to convey a sense of duty" (Keirsey and Bates, 1978, p. 29).

According to Jung's (1933) theory of Psychological Types, all conscious mental activity can be classified into four mental processes--two perception processes (sensing and intuition) and two judgement processes (thinking and feeling). Persons categorized as sensing simply make observations and form perceptions through the senses. Intuitive people form perceptions based on meanings and insight. Everyone possess both traits, but sensing types prefer sensing over intuition, while intuitive types prefer intuition. The thinking types are the logical decision makers while the feeling types make judgement according to personal values and subjectivity. Again, everyone uses both

thinking and feeling, but many individuals have a preference for one over the other. Jung (1933) stated, "sensation establishes what is actually given, thinking enables us to recognize its meaning, feeling tells us its value, and finally intuition points to the possibilities of the whence and whither that lie within the immediate facts" (p. 107).

Jung's theory was largely ignored during the 1930's and 40's as behaviorist theorists took center stage in explaining development and learning. In the 1950's, Isabel Myers and her mother revived Jung's psychological type theory as the theoretical foundation for the Myers-Briggs Type Indicator. They used Jung's theory to do what Jung refused to do--categorize people by type. This instrument identifies 16 different patterns of action, Jung's four temperaments in different combinations. Keirsey and Bates' have used the Myers-Briggs to study temperament. They feel that personality characteristics influence people's affective dimensions such as beliefs, "wants, motives, purposes, aims, values, needs, drives, impulses, [and] urges" (1978, p. 2). They used Jung's same four basic temperament types based on the Greek Gods Dionysus, Epimetheus, Prometheus, and Apollo.

The Dionysian is a free-spirited, spontaneous, independent, action-oriented, impulsive and optimistic individual. The Epimethean is loyal, values traditions, is organized, responsible, and has a strong sense of duty.

Prometheans are analytical and self-critical. They also love intelligence, power, and control. The Apollonian is people- and future-oriented. These people hunger for a unique identity and self-actualization. (See Table 1 for detailed characteristics of Keirseley and Bates temperament types.)

Golay (1982) has used Keirseley and Bates research on temperament to focus on learning styles. Golay's learning patterns have the following relationships to Keirseley and Bates:

| <u>Golay's Learning Patterns</u> | <u>Keirseley-Bates Temperaments</u> |
|----------------------------------|-------------------------------------|
| Actual-Spontaneous Learner | Dionysian Temperament |
| Actual-Routine Learner | Epimethan Temperament |
| Conceptual-Specific Learner | Promethean Temperament |
| Conceptual-Global Learner | Apollonian Temperament |

(See Table 2 for detailed chart of characteristics of Golay's four types of learners).

According to Golay (1982) "temperament is primary; abilities, preferences, emotions and actions are secondary. One's temperament predisposes him to certain ways of thinking, understanding, or conceptualizing, and to having certain wants, motives, or values" (p. 12). Golay (1982) feels that if we know a person's temperament we can usually predict their behavior, including their learning behavior because a person's behavior is usually controlled by temperament.

Table 1

Characteristics of Keirsey-Bates' Four Temperament Types

Dionysian

| | |
|----------------------------------|--------------------|
| Action-oriented | Impulsive |
| Fraternal | Values variety |
| Open to new experiences | Spontaneous |
| Enjoys taking risks & challenges | Thrives on tools |
| Must be free | Independent |
| Optimistic | Likes to be mobile |

Epimethean

| | |
|---------------------------------|--------------------|
| Values consistency | Not a risk taker |
| Likes order & routine | Relies on familiar |
| Conservative | Bound & obligated |
| Loyal | Sense of duty |
| Pessimistic | Stable |
| Responsible | Likes research |
| Likes rules and regulations | Organized |
| Sense of fundamentals | Practical |
| Plan, prepare, & practice motto | Loves repetition |
| Tradition is important | Likes group work |

Promethean

| | |
|-------------------------|--------------------|
| Self-critical | Analytical |
| Question asker | Loves intelligence |
| Desires power & control | Likes new ideas |
| Competence | Future-oriented |
| Accumulator | Open to change |
| Organizer | Perfectionist |

Apollonian

| | |
|-------------------------------|--------------------|
| Self-discovery | Sense of mission |
| Self actualization | People-oriented |
| Seeks purpose in life | Genuine |
| Values personal relationships | Future-oriented |
| Hunger for unique identity | Goals not tangible |
| No masks | |
| (Keirsey & Bates, 1984) | |

Table 2

Characteristics of Golay's Four Types of Learners

The Actual-Spontaneous Learner (38% of the students)

| | |
|------------------------|---------------|
| Physical Involvement | Fun Loving |
| Stimulating the Senses | Bold |
| Realistic | Adventuresome |
| Immediacy | Competitive |
| Spontaneity | Challenge |
| Expending Energies | Contest |
| Function-lust | Risk |
| Free-spirit | Excitement |

The Actual-Routine Learner (38% of the students)

| | |
|------------------|---------------------|
| Social Belonging | Preparing |
| Caretaker | Conserving Energies |
| Giving Service | Being Decisive |
| Obligation | Step-by-Step Order |
| Responsibility | Routine |
| Stable | Policies |
| Sensible | Rules |
| Practical | Standards |
| Planning | |

The Conceptual-Specific Learner (12% of the students)

| | |
|-----------------------------|-------------------|
| Developing Intelligence | Ingenuity |
| Being Capable | Critiquing |
| Possibilities of Principles | Explanations |
| Impersonal Analysis | Predictions |
| Being Concise | Technical Details |
| Building Systems | Classifying |
| Exploring Ideas | Categorizing |
| Objectivity | Depth |

The Conceptual-Global Learner (12% of the students)

| | |
|--------------------------|-----------------------|
| Understanding Self | Insightful |
| Self-Actualization | Appreciative |
| Possibilities in People | Imaginative |
| Empathetic | Speculative |
| Global | Inspirational |
| Developing Relationships | Idealistic |
| Integrity | Personalizes Learning |
| Subjectivity | Breadth |

(Golay, 1982, p. 43-44).

Orientation For This Study

The philosophical framework for this study comes from Dewey's (1933) belief that open-mindedness, responsibility, and wholeheartedness are prerequisites to reflective action. The curricular languages for this study are scientific and ethical. Reflective activities that are action oriented, that permit trial and error, that encourage question asking and critical thinking, and that provide opportunities are from scientific valuing of curriculum. Activities that help students examine their own teaching in relation to their beliefs about the purposes of education are grounded in ethical curricular values. Both languages permit a focus on the individual preservice teacher rather than on a generalized instructional strategy designed to fit all students. This study focuses on both, the personal and psychological dimensions of the individual, and differing instructional strategies in an attempt to discover features of instructional strategy that are processed differently by individual students.

CHAPTER III

METHODOLOGY

The purpose of this study was to examine the process preservice teachers use when completing activities designed to promote reflection. The case study method was used to gather and analyze data. It was selected over other methods because it attempts to understand the whole individual in the totality of that individual's environment (Ary, Jacobs, Razavieh, 1985). I was interested in examining not only the levels of reflectivity of the students, but also their thoughts, feelings, and beliefs regarding reflective teaching and teaching and learning in general. The investigator served as a participant observer, but limited by the dual roles of teacher and researcher. Participant observation may be used in an observational case study to better guide class discussions and activities along the dimensions being observed. It was important to remember that there were no right or wrong answers regarding the reflective activities and papers; the task was to encourage students to express themselves freely and honestly and to observe how they reflected.

Theoretical Framework for Case Study

A case study is an empirical inquiry (i.e. guided by observation and experience) that uses multiple sources of evidence to investigate a contemporary phenomenon within its real-life context when the boundaries between phenomenon and context are not clearly obvious (Yin, 1989). In simpler terms, Bogdan and Biklen (1982) defined a case study as a detailed examination of a single setting, subject, event or depository of documents.

Bogdan and Biklen (1982) identified many different types of qualitative case studies including; historical organizational case studies, observational case studies, and life histories. Historical organization case studies focus on tracing the development of a particular organization over a given period of time. Observational case studies concentrate on a particular organization or some aspect of it such as a specific place, activity or group of people in the organization. Life history case studies use interviews in order to find out details about some part of a person's history or simply to look at life from the perspective of the interviewee. Observational case study was used in this investigation.

Participant observation is the main source of gathering data for this observational case study (Yin, 1982). One advantage of the participant observation approach is it provides constructive feedback to a program staff that is

receptive to such feedback (Udinsky, Osterlind, & Lynch, 1981). The most distinctive advantage of participant observation regards the researcher's ability to gain access to events or groups that might otherwise be inaccessible for research (Yin, 1982). A third advantage is that the close relationship of the researcher to the subjects allows the researcher to increase his or her ability to view reality through the same lens as the subjects in the study, allowing for a more accurate portrayal of the case study phenomenon than an external observer might have (Yin, 1982; Udinsky, Osterlind, & Lynch, 1981).

A disadvantage of the participant observation approach is that it allows for personal biases to interfere with the gathering of data and the accuracy of information presented (Yin, 1982). Udinsky, Osterlind, & Lynch (1981) identified a second disadvantage of participant observation in that the observer usually has to record behaviors and events observed after the occurrence, therefore, he or she has to recreate and rethink what was observed. This may allow the researcher to record inaccuracies or distorted information. Recorded observations in this study were made immediately after each appropriate class meeting to minimize opportunities for these distortions to occur.

A unique strength of a case study is that it has the ability to deal with six different evidence sources: documents, archival records, interviews, direct observation,

participant observation, and physical artifacts (Yin, 1982). Four of the foregoing evidences were used in this study: documents, interviews, direct observations, and participant observations.

Data Sources and Collection

Written documents

Students were required to complete several written assignments that provided relevant information for this study, including journals, reflective papers, and project papers. The reflective and project papers were based upon a preceding classroom activity.

Journals

Students in the class were all required to keep a journal. Based upon Brown's (1990) suggestion, students were instructed to reflect for at least 10 minutes each day on meaningful recollections regarding their professional experiences. Students were informed that their entries should reflect their perceptions of teaching and learning based upon the classes they were enrolled in, with a special focus on Educational Psychology and their internship field experiences. No particular style was assigned for these reflections so that the style that each student selected or developed could be analyzed as important information about his or her reflective processes. The journals were read and responded to four times during the semester, once a month.

All journals were read and responded to in the same way during the class focusing on content of the student's reflections, and the student's level and process of reflecting. Data analysis of journals of those students selected for the study was not done until after the semester had ended and final grades were submitted.

Several journal entries focused on a specific topic assigned in the classroom. In the first entry, students were asked to write a statement regarding their philosophy of education, and what they believed to be the purpose of education. The entry also included autobiographical reflections on why they chose to enter the teaching profession, and how they saw themselves as part of the teaching and learning process.

Journal keeping. Simon (1978) stated, "journal keeping is probably as ancient as writing... (p. 7)" Holly (1983) referred to it as a "humbling process" (p.135). She described it as consisting of "impressions plus descriptions of circumstances, others, self, motives, thoughts, and feelings" (p. 135). According to her, writers rely on their senses and impressions while recording their experiences as clearly as possible.

According to Brown (1990), keeping a journal serves several purposes: (a) it allows for a self assessment, (b) it represents a way to grow, (c) it provides a way of looking back at what you do and think about why you do it,

(d) it serves as a memory tool to relive actions of the past, and (e) it is a way to talk to yourself. Journal writing also allows the writer the opportunity to learn four things about himself or herself: what he knows, what he feels, what he does and how he does it, and why they do it (Yinger & Clark, 1981).

Holly (1983, 1984) listed several other purposes and benefits of journal keeping. "It is a way to document what you do, events that hold significance for you as a teacher, and to clarify your beliefs and assumptions and further, to test these out in your behavior" (p.176). She also noted that journal keeping "can be a tool for analysis and introspection" (p.135).

According to Holly (1983, 1984), a journal is both subjective and objective because there is a dialogue between facts and interpretations along with the presentation of events as they occurred. As this dialogue is read, the writer and the reader is able to differentiate between the facts and the interpretations. She later explained how the writer can carry on a dialogue with regard to various dimensions of experience by answering questions such as the following:

What happened? What are the facts? What was my role? What feelings and senses surrounded events? What did I do? What did I feel about what I did? Why? What was the setting? The flow of events? And later, what were the important elements of the event? What preceded it? Followed it? What might I be aware of if the situation recurs? (p. 139).

Journal entries are made in varying time spans. According to Holly (1984), many people prefer to write in their journals immediately after the experience is encountered, but are not always able to because of time constraints. At the same time, some people prefer to make their entries at a later date when they have had some time away from the experience. In order to allow different views to surface, Holly suggested using an eclectic approach that includes using both methods in an alternating fashion. Progoff (1975) concurred with these two ways of journal writing.

Regardless of which method is used, Holly (1983) recommended that the writer chose a quiet place for writing journal entries. She stated, "the journal writer needs time for quiet reflection; for going back and reconstructing or recapturing the setting, thoughts, and feelings at the time, the flow of events. Once these flows are felt, other events, behaviors, or ideas that "fit" with them will become increasingly evident" (p. 141).

Holly suggested that the writer "not force or judge your journal" (1983, p. 196) but to learn from it by examining the patterns and clues that surface. She also expressed that students can learn about themselves, their teaching, and their professional growth through their writing by following three suggestions. The suggestions were as follows: (a) Immediately after writing an entry,

reread it in the manner you would a story; (b) As you reflect, you might see the need or have the desire to add or delete comments or to elaborate on previously written thoughts or feelings; and (c) Whenever you feel interested in what you have previously entered in your journal, read it.

Simon (1978) expressed that keeping a journal brings about changes because as we record our behaviors they are viewed in a different perspective. He referred to journal entries metaphorically as snapshots of one's life that are returned to from time to time and usually something different is seen each time the journal is reviewed. Growing usually takes place during this process.

He suggested using a system of coding, keying, or indexing. Tappan developed a system that differentiates journal contents. He also expressed that writers can develop their own system based on personal interests.

Progoff (1975) has done extensive work on journal writing as a method for personal growth. He has developed a journal workshop for those interested in self-examination and reflection through journal writing. He teaches individuals to sink into a relaxed state of consciousness and meditate on their lives. During this relaxed state, the individuals identify the period of time when they first realized their individual self and move toward the present while recollecting memorable thoughts and images. Once

individuals have practiced reflecting and meditating according to Progoff's intensive journaling technique, the individuals can continue this technique on their own. Progoff feels that his technique is appropriate for teenagers through adults, regardless of their race, educational background or socioeconomic level (Simon, (1978).

Reflective papers

Students were required to write four reflective papers. An activity that emphasized the importance of clear communication was conducted prior to writing the first reflective paper. This activity was chosen because it allowed the students to complete an uncomplicated task and write about it in whatever way they chose.

The activity involved describing an object to someone who could not see it and asking them to draw the object from the information given. Students did the activity once in class and then were required to repeat it with someone outside of the class. (See Appendix C for complete instructions). After the activity was completed, the students wrote a reflective paper that focused on what took place during the activity and any perceptions they had about it.

After students had submitted the first reflective paper, they were asked to write a second paper in response to teacher-directed questions about the same activity.

These questions were of a probing nature to encourage the students to think past what actually happened and move to their thinking processes and what they learned from the experience. Examples of the teacher-directed questions were as follows:

1. When you finished the activity and allowed your volunteer to explain what he or she was thinking and interpreting while doing the drawings, did it help you to see what you could have said differently to make it clearer? Did you probe the volunteer to find out as much as possible about why he said or thought the way he did? What did you discover?

2. Were there times when you didn't know what to do next or how to respond to something the person said or did? Times of confusion? If so, what did you do and what happened? (See Appendix D for complete list of teacher-directed questions).

The third reflective paper was focused on perceptions regarding the peer teaching lessons taught from Cruickshank's Reflective Teaching Lessons. Cruickshank et al. (1981) developed 36 Reflective Teaching Lessons (RTL) to be used in peer teaching situations.

The 36 lessons are from three learning domains; cognitive, psychomotor and affective. The majority are cognitive. The lessons call for various teaching behaviors such as: demonstrating, describing, designating, explaining,

fostering attitude change, stimulating, and practicing problem solving.

The students were required to teach one of five Reflective Teaching Lessons, preselected on the basis of data gathered in a pilot study. Lessons were chosen for their uniqueness and their focus on different teaching behaviors.

The lessons used in this study were: The Memory and Forgetfulness Task, describing and explaining memory and chemistry; The Magic Square Task, demonstrating mathematical problem solving; The Arrowhead Task, designating parts of a flint arrowhead; The Freckles and Film Task, demonstrating and practicing solving word problems; and Discipline in Elementary Classrooms, designating effective classroom management. The students were observed and videotaped as they taught their given lesson. The lesson that each student taught was randomly assigned.

Following Cruickshank's model, the lessons were taught by dividing the class into groups of four to five students. One student from each group was chosen to serve as the designated teacher for each lesson. Therefore, everyone had a lesson to teach but each person within a group had to teach a different lesson. The lessons were taught only to the members of that group. The groups were assigned to separate classrooms; with two to three groups per room. Two class periods were designated for these lessons to be

taught. Each person was given a limit of 15 minutes or less to teach his or her lesson.

Following Cruickshank's model, after each lesson, the designated teacher administered a post-test to assess the student's learning and a learner satisfaction form. Based on the information gathered from these two evaluations, the designated teacher led the group through a 10 to 15 minute discussion on the shared teaching and learning experience. During the discussion, the designated teacher asked questions targeted at raising the learners' level of thinking about teaching and learning. Some of the questions were taken from Cruickshank's et al. (1981) (e.g. "what was learned or rediscovered about either teaching or learning that may be worth remembering and using?, and what happened that facilitated learning and satisfaction?" (p. 30). Additional questions were developed by the investigator in order to further probe the students' thinking. Examples of these questions are: "What was meaningful to you in the lesson? What was difficult for you? When did the information come together in your mind? What could I have done to make the lesson better?" (See Appendix E for a complete list of questions.)

Students were also required to teach several lessons during their internship. Content area instructors assigned the lessons to be taught for each subject area. Students were asked to reflect on these teaching activities in the

same manner used for the RTLs, i.e. conducting a discussion on learner satisfaction and achievement at the end of the lesson. If the nature of the class made it impossible to conduct the discussion after the lesson, reflections were made in the journal.

The fourth reflective paper was based upon one of the internship teaching lessons. The student selected one of the teaching lessons to write about in the same manner as the third reflective paper (Cruickshank's RTL model of reflection). It varied from Cruickshank only in that the students selected the subject matter.

Project papers

Students were assigned two projects to complete and write up. Project A asked students to list and reflect on behavior modification techniques used in their internship setting and/or college classroom. (See Appendix F.)

Project B dealt with personality type and temperament and had several components. Prior to a class session focused on understanding learning styles and temperament types, students were asked to complete the Keirsey Temperament Sorter. The lecture on learning styles included a handout of summarizing the different temperament types. As a follow up to the lecture, students were instructed to make their own assessment of the temperament of a close friend, family member, or acquaintance based on the Keirsey-Bates categories then have that person actually complete the

Keirseey Temperament Sorter. The student was then instructed to share the results of the sorter with the person and discuss his or her temperament type using the summary sheet as a guide or reference. The final task for Project B was a reflective paper focusing on occurrences during the activity, their perceptions about it, and how they would teach the individual they selected for assessment in a regular classroom based upon the knowledge they had on the person's temperament. (See Appendix G for complete instructions.)

Interviews

All interviews were conducted according to Spradley's (1979) strategies for conducting ethnographic interviews. Spradley stated that an ethnographic interview is very similar to a friendly conversation; there is no particular agenda, the subjects ask questions which allow them to take turns talking even though the ethnographer guides the conversation in a manner that encourages the informant to do most of the talking, there are times of pausing and reflecting when no one is talking, and there is a greeting and departure ritual.

Spradley expressed that the most important elements of an ethnographic interview are: (a) explicit purpose, (b) ethnographic explanations, and (c) ethnographic questions. The ethnographer makes the purpose explicit by clearly stating the purpose of each session. In making the purpose

clear, the ethnographer guides the conversation in order to discover the informant's knowledge and perceptions about the selected topic.

Ethnographic explanations include such things as the project's goal, how and why the interview data would be recorded, and what type of interview it would be in order to help the informant know what to expect, and the kind of questions that were asked.

There are more than 30 kinds of ethnographic questions. The three main types include descriptive or leading questions that enable the ethnographer to discover general information about the informant, structural questions that develop out of leading questions and help the ethnographer understand how the informant organizes their knowledge and reality, and contrast questions that assist the ethnographer in finding out more about the informants native language. Interviewers used all three types of questions in this study.

A subset of students from the class were selected for individualized interviews. Thirteen students were selected by a faculty member who had read their reflective papers and examined the questionnaires completed by each student. Two graduate assistants familiar with Spradley's principles and suggestions for conducting an interview did the interviewing.

The interviews focused on Cruickshank's Reflective Teaching Lessons. The interviewer began each interview by reading the following statement to the student.

The purpose of this interview is to find out more about your feelings and perceptions regarding teaching and learning and the Reflective Teaching Lessons recently taught. There are no right nor wrong answers, so feel free to respond to the questions as honestly and openly as possible. If you have any comments regarding the Reflective Teaching Lessons and/or your beliefs about teaching and learning that are not addressed during this interview session, please feel free to express them. I remind you that your responses will not be heard by the instructor, Loraine Stewart, until the end of the semester when grades have been submitted to the registrar.

Observations

Students were observed while they taught Cruickshank's Reflective Teaching Lessons when the investigator rotated between the three rooms used for teaching the lessons in 15 minute intervals, noting information about each student's style of teaching. Fieldnotes were made based on those observations. The Reflective Teaching Lessons were also video-taped. Due to the lack of available video equipment, the anonymous status of the potential subjects, and the investigator's inability to be in all three rooms at once, only approximately half of the student's lessons were video-taped. Of those lessons, three subjects for this study were included.

The primary focus of these observations was to determine the presence or absence of characteristics and practices that are believed to be associated with reflective

teachers. The characteristics included: display of initiative, internal locus of control, self-confidence, curiosity, and spontaneity (Richards et al., 1989) and creativity (Cruickshank, 1981). Practices included questions asked, teaching approach, emphasis on inquiry, open-mindedness, flexibility and lesson design and presentation (Roth, 1989).

Questionnaires

Posner's Teacher Belief Inventory, Golay's Learning Pattern Assessment, and Keirsey Temperament Sorter were the various questionnaires used in the study. Each were completed and scored by the students as a homework assignment. Each also formed the basis for class discussion related to educational psychology. The results of these questionnaires were used as one factor in selecting students for the study.

Golay's (1982) Learning Pattern Assessment was used to assess each student's natural style of learning. His instrument consists of 40 statements arranged in a six point Likert scale.

Posner's Teacher Belief Inventory was administered at the beginning of the semester as a means of exploring the students' initial perspective on teaching. This questionnaire consists of 57 Likert scale statements that focus on issues relating to six areas in the classroom:

control, diversity, learning, teacher's role, school and society, and knowledge.

The Keirsey Temperament Sorter consists of 70 binary statements. Students choose which statement they preferred.

Research Design

Yin (1982) defined a research design as the "logical sequence that connects the empirical data to a study's initial research questions and, ultimately, to its conclusions" (p. 28). It should address what questions or issues to study, what data are relevant, what data to collect, and how to analyze the findings. A case study research design consists of five important components: "(a) study's questions; (b) its propositions, if any; (c) its unit(s) of analysis; (d) linking the data to the propositions; and (e) criteria for interpreting the findings" (Yin, 1982, p. 29). This section is organized according to Yin's five components.

Research Questions or Issues

Defining the research issues or questions is probably the most important step when completing a case study according to Yin (1982). The types of questions asked are instrumental in developing a well focused case study. Understanding a study's questions requires that the researcher understand that a question has both substance and form. Substance deals with expressing what the study is

about and form deals with the type of question. A simple way of categorizing types of research questions is through the basic who, what, where, when, and how scheme. "How" and "why" questions are more appropriate for case studies because they focus on what one is really interested in knowing, and they deal with operational links that need to be traced over time instead of frequencies or incidence.

"Issues" for studying educational programs are those few key questions used to plan and structure the study. The aim is to have the program become more fully understood. These questions are not unlike basic research questions--but are more pointed and at least imply special attention to the context of program studied....From data gathered on each issue the researcher develops assertions or generalizations, possibly worded similarly to the issue question, but no longer appearing to be interrogatory. (Stake, 1989, p. 16)

The questions or issues that initially guided this study emerged from Korthagen's (1988) observation that student teachers with internal learning orientations differ from students with external learning orientations in their preferences for learning through reflection, and his belief that these differences in learning orientations may be caused by the students' belief systems and their theories about learning. A second issue covered the nature of instruction: Would a prescribed technical instructional strategy such as proposed by Cruickshank and Korthagen promote reflection that differed from the scientific or ethical curriculum values that suggested a more open-ended, applied focus for instruction?

The issues in this study were as follows:

1. Do preservice teachers' have beliefs about teaching and learning? If so, how do their beliefs influence the way they reflect upon their teaching?

2. Does encouraging students to reflect on their teaching experiences enhance their ability to learn from their experiences? Do teacher directed questions influence reflective thinking in post situations, if so, how? (Post situations refer to students writing about what happened and why after completing a given activity.)

3. How does our encouragement of reflective thinking relate to students' natural pattern of thinking or reflecting? What happens when it is in opposition to their natural pattern? (Natural pattern refers to temperament and learning style).

4. How does writing reflective papers influence the manner in which students evaluate their teaching experiences and learn from them?

Propositions

Propositions address specific information that you want to know about the questions or issues that are guiding the study. These propositions do not dictate what you should study but what it is you want to know about the topic you are studying and where to look. Propositions are stated in terms of alternative possibilities. Propositions for this study were as follows:

1. Preservice teachers:
 - a. have affirmed beliefs about teaching and learning; therefore their beliefs exemplify the way they reflect on their teaching.
 - b. do not have affirmed beliefs about teaching and learning; therefore, their beliefs have little, if any, influence on how they reflect on teaching.
 - c. have affirmed beliefs about teaching and learning; but their beliefs do not appear to influence the way they reflect on their teaching.
2. Student reflections exhibit:
 - a. insights gained that will allow the student to come to new awarenesses and realizations; recognizing strength's and weaknesses, better understanding own actions, experiences, and ways of knowing
 - b. acknowledgement that meaningful lessons have been learned
 - c. establishment of future goals
 - d. recognition of joyful experiences, surprises, and happy moments that may lead to affirmation or growth
3. Teachers encourage students to reflect:
 - a. in the same manner as the teacher

- b. in the manner that is natural for the individual student (manner refers to process dictated by temperament type and/or learning style)
4. Examining teaching through reflective papers and journals encourage students to:
- a. examine, critique, and analyze their experiences, thoughts, and feelings
 - b. raise questions and concerns
 - c. recognize and examine dilemmas, struggles, frustration, fears, etc.

Unit of analysis - The case

Unit of analysis relates directly to the problem of defining what the case is and the way the initial research questions have been defined. In this study, the case was a class of undergraduate college students enrolled in a Psychological Foundations of Education Course (430-01) at the University of North Carolina at Greensboro, fall semester 1990. (A university semester is a period of 15 weeks.)

Subjects. This class consisted of 32 Caucasian and one African-American female undergraduate students majoring in elementary education. Due to this fact, the pronoun "she" is used throughout this study to refer to the subjects. All students in the class engaged in the same activities except for the individual interviews. The activities were incorporated as course requirements. To assure anonymity,

pseudonyms are used for the subjects and all other proper nouns except the name of the university.

Subject Selection. Thirteen students were selected as potential subjects from the class of 33 educational psychology students. The basis of initial selection included (a) their desire and willingness to participate in a study that encourages teacher reflection, (b) the level of reflectivity exemplified in their reflective papers, (c) their learning style and personality type, (d) the richness of information provided by them in their journals and through the interviews. Seven were ultimately selected from the pool of thirteen for the study.

The identities of the thirteen potential subjects were not known to the investigator until after the semester was over to avoid possible biasing. The final seven subjects were selected by the investigator after the semester ended. Reflective papers, learning pattern and temperament inventories, interviews, journals, and age were factors considered in selecting the final subjects. The goal was to select students who differed from each other in reflection, temperament, beliefs, etc. so that those differences could be examined in relation to instructional strategies.

Orientation of Subjects. During a regular class session, the entire class was informed of all relevant information regarding the study. They were assured that participation in the study would not affect their grades in

the class, that there were no risks involved in participating, that the highest level of confidentiality and anonymity would be upheld, and they would be able to withdraw from the study at any time without duress. Students were informed that they all would do the same assignments, and that the only additional requirement of students participating in the study would be the individual interviews. They were told that the subjects for the study would not be chosen until after the semester was over and grades had been submitted. Students were also informed that all data gathered regarding them would be available for their review. Consent forms, containing all relevant information regarding the study and requesting permission to copy and use any of the students' work, were distributed for review and signatures after all information was presented and questions answered. All 33 students signed the consent forms permitting the use of class assignment papers and questionnaires. Twenty-five students agree to be interviewed if selected for the study.

Data Analysis

According to Yin, the analysis of case study findings is the most difficult aspect of doing a case study. The analytic process to be used should begin with the selection of a general analytic strategy and should be dealt with in the case study protocol.

Linking data to propositions

Data can be linked to propositions in several different ways; the most promising way for case study research is pattern-matching, whereby several pieces of information from the case are related to a theoretical proposition. This method was selected for the present study.

Five propositions were developed as part of the protocol for this study. As gathered data was being prepared for analysis, it was deemed necessary to alter the original propositions based upon the information found. At that time, the propositions were restructured and reduced to four instead of five. (See section on propositions for propositions that guided this study).

First a subject-by-subject analysis was conducted according to propositions and triangulation of data. Second, a between subjects analysis was conducted whereas patterns of common beliefs and approaches toward reflective activities occurred between all the subjects or clusters of subjects.

Criteria for interpreting findings. According to Yin (1982), there is no precise way of setting the criteria for interpreting the kind of results found when doing case studies. Usually the findings are interpreted by comparing at least two rival propositions. The two underlying rival propositions that were consistent throughout this study focused on whether behavior and thinking patterns exhibited

by individual students was characteristic of reflective persons or nonreflective persons. Therefore, the pattern-matching technique would be used by describing the two potential patterns then examining the data to see which pattern it matches best.

As a means of discovering existing patterns, journals, reflective papers, and observations were analyzed according to a coding system derived from Tappan (1978). Tappan uses a system of letters that represent different specifically defined behaviors. The letters provide a means of coding journal entries to make it easier for the researcher to identify patterns and to analyze content. Initial codes were developed as part of the protocol, but final codes were dictated by the content of the journal entries, reflective papers, and observations. (See Appendix H).

Codes were also used to cite references for the subjects' data sources. They were as follows: autobiographical statement (AS), journal (JN), Project A (PA), Project B (PB), and reflective teaching papers (RTP and the corresponding number of one through four).

Information gathered from Posner's Teacher Belief Inventory was also linked to propositions. The information was initially analyzed subject-by-subject then between subjects. Each analysis began with the accounting of which items were responded to with "strongly agree" and "strongly disagree." These items were the only ones used in the

analysis because they were believed to represent issues which the student had strong beliefs, with no reservations. Each of these items were listed for each subject and compared with other beliefs and philosophies expressed. Where corroboration, contradiction, or consistency existed, the item and belief were elaborated on to explain the relationship; otherwise the items were only listed in categories of the two responses.

Analysis between subjects consisted of tabulating each student's responses for all 57 items and comparing them. Each individual item was examined in order to discover the range of responses.

Criteria for Judging the Quality of Research Designs

Yin (1982) stated that there are four logical tests that are relevant when judging the quality of a case study: (a) construct validity, (b) internal validity, (c) external validity, and (d) reliability.

Construct Validity

Yin (1982) pointed out three tactics that can be used to increase construct validity in case studies. First, multiple sources of evidence can be used as data. This provides multiple measures of the same phenomenon and allows the researcher to corroborate or triangulate sources. Triangulation of data is a method used to cross-check the accuracy of the data that is collected (Goetz and LeCompte,

1984; Lincoln and Guba, 1985). It also assists in correcting biases when the ethnographer is the only observer in a study.

In this study, the multiple sources of evidence that were gathered included: reflective papers, journal entries, interviews, observations, and responses to Posner's Teacher Belief Inventory, Golay's Learning Pattern Assessment, and Keirsey Temperament Sorter. These sources of evidence were gathered on each student as she completed the various assignments.

Second, a chain of evidence linking the questions asked to data gathered, and conclusions drawn assisted in increasing construct validity and reliability. The chain of evidence in this study included copies of each student's semester papers, the researcher's journal and fieldnotes, the course syllabus, instructions for all assignments, transcripts of all interviews, video-tapes of students teaching Reflective Teaching Lessons, and outlines of each class lecture. Clear citations for references regarding relevant portions of the case study data base were made and relevant portions of the case study data base were included in the appendix.

The third tactic that can increase construct validity is to have the subjects and informants in the case review the draft case study report. The subjects in this study were given an opportunity to review transcripts of

interviews during fall semester, and the portion of the report that related to them during spring semester. At that time, they were encouraged to provide any feedback they felt would increase the accuracy of the written report and to add any afterthoughts they had regarding the course or interviews.

Internal validity

Internal validity is only necessary if the researcher is trying to find a cause and effect relationship in the study; usually only appropriate for causal or explanatory studies. Pattern matching is one way of addressing internal validity. This study focused on an examination of patterns in students' approaches toward different reflective teaching activities but was not set up as a cause and effect study. Pattern matching was the main means of establishing internal validity.

External validity

External validity deals with knowing whether a study's findings are generalizable beyond the immediate case study. Case studies provide little to base a scientific generalization on because they do not represent a sample of a given population. Yin stated, "...case studies, like experiments, are generalizable to theoretical propositions and not to populations or universes.... The investigators goal was to expand and generalize theories (analytic generalization) and not to enumerate frequencies

(statistical generalization)" (p. 21). Establishing external validity is usually a major problem for case studies researchers because critics fail to understand that case studies rely on analytical generalizations not statistical generalizations. The only generalizations made in this study were analytic.

Reliability

The goal of the reliability test is to make sure that if the present researcher or a future researcher were to conduct the same case study over again, the same findings and conclusions would be found. In order to create a situation conducive to this, it is important to develop a case study data base, which is a gathering of evidence that is separate from the final case study report.

To establish reliability, it is also important to develop a case study protocol. It serves as a guide to the investigator in carrying out the case study because it constantly reminds him or her what the case study is about.

The protocol should have the following sections:

- overview of the case study (project objectives and auspices, case study issues, and relevant readings about the topic being investigated);
- field procedures (credentials and access to the case study "site," general sources of information, and procedural reminders);
- case study questions (the specific questions that the case study investigator must keep in mind in collecting data, "table shells" for specific arrays of data, and the potential sources of information for answering each question); and

-guide for the case study report (outline, format for the narrative, and specification of any bibliographical information and other documentation). (Yin, 1982, p. 70).

CHAPTER IV
PRESENTATION AND DISCUSSION OF DATA

The purpose of this study was to examine the process preservice teachers use when completing activities designed to promote reflection. Selected data are presented and discussed as they relate to individual subjects and propositions and between subjects and propositions.

Introducing the Participants

Six Caucasian women and one African-American woman participated in this study; three were traditional and four were nontraditional students. Data for the study was gathered fall semester of 1991, the semester just prior to student teaching.

The three traditional students were Deloris, Mary, and Sharon. Deloris was a cheerful young lady with a positive attitude toward life. She always sat in the back of the class and readily joined in class discussions. Several times during the semester she came by the office to discuss dilemmas she was faced with in her internship class. Deloris' temperament type was Promethean and her learning style Conceptual-global. She had no prior teaching experience.

Mary was a very outspoken student who always sat at the front center of the class. Her temperament type was Apollonian and her learning style Conceptual-global. Her only teaching experience was a part-time tutoring job at a local day care center.

Sharon always sat in the front of the class and frequently participated during class discussions. Her temperament type was Epimethean and her learning style Actual-routine. Tutoring in a public school was her only teaching experience.

Gwen, Jacqueline, Jane, and Patrice were nontraditional students. Gwen was 41 years old with two teenagers; aged 14 and 17. She usually sat in the back of the class and periodically joined in the class discussions. Gwen's temperament was Epimethean and her learning style Conceptual-specific. Her career decisions over the years included; homemaker, retail, insurance, and one year as a teacher's assistant. She stated in her autobiographical statement that she chose to work as a teacher's assistant in order to find out if she wanted to teach.

Jacqueline was 35 years old and had two young children; aged 8 and 5. She always sat in the front of the class and periodically joined in class discussions. Jacqueline had a degree in secondary education from the University of Mankind but had never taught. She ended up working in business prior to having her children. Her only teaching experiences

were Sunday School and Vacation Bible School. These experiences made her realize that she still had the desire and ability to teach. Her temperament type was Apollonian and her learning style Conceptual-global.

Jane was 34 years old with two young children; aged 5 and 4. She had worked for a year in business as an instructor in the training department. This was her only teaching experience. Jane always sat in the front of class and frequently joined in class discussions. She was a Promethean with a split learning style divided between Conceptual-specific and Conceptual-global.

Patrice was very cheerful, but frequently disheartened by the negative attitudes of some of her classmates. She worked hard, sat in the front of the room, and frequently participated in class discussions. She was a returning student, aged 26, who had started college years ago but decided to discontinue until she knew what she wanted to do. Patrice had an Apollonian temperament type and a Conceptual-global learning style. She had no teaching experiences except those gained through her studies.

Subject by Subject Analysis

The propositions that guided this study serve as the organization of this section of the chapter. Condensed titles for the propositions are as follows: (1) preservice teachers' beliefs and philosophies about teaching and

learning, (2) preservice teacher's reflections on their experiences, (3) process of organizing and reflecting, and (4) examining teaching through reflective papers and journals. Data will be initially presented for each subject individually and then across subjects.

The preservice teachers in this study expressed personal statements that exemplified their beliefs and philosophies about teaching and learning, proposition one, in two manners; (a) Posner's Teacher Belief Inventory (TBI), and (b) written assignments and individual interviews. (See Appendix A for TBI).

The preservice teacher's reflections on their experiences, proposition two, tended to focus on one or more of the following themes: (a) insights gained that enabled them to come to new awareness and realizations recognizing strength's and weaknesses, and coming to a better understanding of their actions and experiences; (b) verbal or written acknowledgement that meaningful lessons had been learned; (c) establishment of future goals; and (d) recognition of joyful experiences, surprises, or happy moments.

Students used different processes for organizing their ideas and reflections, proposition three. Some exemplified the reflective process of the teacher, some the reflective process that was natural for the individual student, some combined their own natural style with the reflective style

modeled by the teacher. Reflective papers and journals were the two main sources used to examine students' process of reflecting and organizing. It is important to note that prior to all assignments, especially those accompanied by lead questions, students were informed that there was no right nor wrong way to write papers or journal entries. It was emphasized that the lead questions were provided only as probes; students were encouraged to deviate from them.

Evidences from students' reflective papers and journals, proposition four, indicated that when students are encouraged to evaluate their teaching experiences they examine, critique, and analyze those experiences. Students reflected on changes they felt could have been made to increase the success of an activity, questions and concerns that had been raised as a result of a particular activity or reflection, and dilemmas faced that resulted in feelings such as lack of confidence, frustration, or fear.

The data relating to the seven individuals in this case study are organized around the four propositions. A proposition subcategory is omitted if it was not represented in a student's data sources. The term reflective paper is used to refer to both projects and papers. (See preceding chapter for key to coding of citations.)

DelorisProposition 1: Preservice teachers' beliefs and philosophies

Teacher Belief Inventory. Deloris strongly agreed or disagreed with 14 of the 57 items from Posner's inventory. She "strongly agreed" with the following items: 4, 12, 13, and 17, relating to control; 25, focusing on diversity; 30, 34, and 37 relating to learning; 38, relating to the teacher's role; and 48, relating to knowledge.

It is important to note that during Deloris' interview, she made statements that supported her responses to Items 25 and 48. In accordance with Item 25, "One of the main problems in classrooms today is diversity among pupils," she stated "if you gear everything to one type of learner, you're forgetting the others. So you have to hit a happy medium." In reflective teaching paper four, Deloris also exemplified her support of allowing for diversity among students by stating,

This type of lesson gave all the students in my class the opportunity to learn. For the active learner, I had a debate game situation; for the visual learner, I had the activity on the board in which those students were able to visualize the information; and for auditory learner, I had the debate and discussion.
(RTP4)

Item 48, "It is as important for learners to enjoy learning as it is for them to acquire specific skills", is reiterated in her response to the interview question addressing her current beliefs about teaching. Deloris

stated, "I believe that learning should always be fun. I'm not for dittos all the time. Its good to have extra curricular things and have extra activities, like an extra worksheet for students who may be slow learners"

(Interview). She saw fun and interest as linked in creating a positive learning environment. "I think that if you have an open mind about it [learning] and the teacher is positive enough in teaching, the kids will want to learn. You know, you try to make learning fun" (Interview).

In addition, Deloris supported her strong agreement with Item 37, "The sheer interest in learning something new and challenging or of successfully accomplishing a task usually supplies sufficient motivation for learning", in an October journal entry. Deloris extended beyond the belief that interest and challenge of an activity motivates learning. She believed motivation is an important responsibility of the teacher as well. Deloris stated,

Motivation is a very important aspect of all good teachers. I feel that if the teachers are motivated about what they teach, the students will be motivated about learning.... Motivation is very important to slow learners especially. If you have a slow learner that will frustrate out easily, if you were motivated about the lesson, and could motivate the class, this frustrated student may become motivated. (JN)

Motivation and interesting seem to go hand-in-hand, therefore, if I show motivation about my lessons it will be perceived as interesting to the students.

On the other hand, Deloris strongly disagreed with two items relating to control, 15 and 16; one item focusing on diversity, 24; and one item relating to school and society,

41. Even though Deloris strongly agreed with Item 4, "Parents would have the right to visit my classroom at any time if they gave me prior notice," she strongly disagree with Item 15, "Parents should be active in formulating curriculum," and Item 16, "Parents should be involved in hiring teachers for their children's schools." This implied that Deloris believed parents should be a part of the school setting, but a limited controlled part.

The knowledge and school and society issues did not appear in any of her writing or in the interview. Diversity, control, learning, and teacher's role were common themes in her reflections as noted in this section and subsequent sections.

Written assignments and interview. Deloris wrote, "My philosophy of education is not by any means set in stone" (AS), but throughout the semester she made many personal statements that related to her beliefs or philosophy about teaching and learning. Deloris frequently wrote that teachers were there for students, not the other way around. "The main thing to remember is that the students are the reason for the teachers, and not that the teachers are the reason for the students" (RTP4).

Deloris saw the teacher's motivational responsibility as working hand in hand with making learning fun.

I just feel that children should love to learn and that teachers should love to teach them. I feel that teaching is a privilege, not just being taught. A teacher must have the desire to want to do the best

they can, and be willing to give their career what it takes to make it a success. I feel that teaching elementary education is the building block for all other education. (Interview)

She saw learning centers as a positive approach to teaching and learning, as long as they were not used as busy work.

Learning centers should always do what their name suggest. The students should learn in the center, it SHOULD NOT BE BUSY WORK! The teacher should always be available for help and support, and always check their work. If centers are developed correctly, they will work wonderfully and be a positive approach to learning. (JN)

Deloris believed teachers are accountable for the learning environment. "The teachers should always try their best to enhance a learning environment that will benefit all the students in the class" (RTP4).

Proposition 2: Preservice teacher's reflections on their experiences

Awareness and realization. Deloris stated that she had come to realize that her weaknesses were slow pacing (RTP4), classroom management (JN), and anticipating what might happen (RTP3). After the Reflective Teaching Lesson, she wrote, "I should have used a 5-cell square on my felt board so that it would not be such a jump from a 3-cell square to a 5-cell square on the test," and "If I would have prepared a formal lesson, I might would have realized that the students needed some form of guided practice before moving to independent practice" (RTP3). Deloris also added that she had come to realize how difficult it is, even for

college students, to comprehend a lot of material (JN). She wrote "After teaching the lesson I realize that students need lots of guided practice in order to sufficiently understand a concept (RTP3).

This student's insights came as a direct result of her teaching experiences. It was actual practice through her experiences teaching her classmates and students in her internship class, rather than readings or classroom activities, that led her to become more aware of her strengths and weaknesses.

Meaningful lessons learned. Deloris wrote several statements that specifically addressed things she had learned as a result of completing course assignments and internship activities. They were as follow:

I learned that teaching is hard!!! It takes a lot of preparation and time.....I realized some of my weaknesses in this lesson was not going through the lesson enough to realize that the learners would need another example. (RTP3)

Its hard to get a point across. With math, like what I was teaching, and in any subject, if you understand it, doesn't mean you're going to be able to teach it. Teaching, you have to be able to get your point across and show the students what you want them to learn. And that's hard. You have to make it simple. You have to make it....and that's why I stayed on the three cell square cause I wanted to make it simple, but I didn't build them up enough to do the task. because the task wasn't simple. (Interview, answer to question 6)

The phrase, "show the students what you want them to learn" was consistent with Posner's Item 34, "I would tell my students exactly what was expected of them in terms of behavior, homework, and lesson objectives."

Deloris' reflections suggested that she had learned about the difficulties of teaching.

The main thing I learned from this particular incidence is that as a teacher you have to leave alternatives open (in response to teacher becoming firmer with students). (JN)

I learned one valuable lesson from this activity and that is that it is very hard to tell someone what they must see. It is very difficult to portray an object in an oral fashion that will sufficiently identify the object. (RTP1)

I have learned something very valuable about learning in general this semester, and that is that you can not expect a child to remember everything you introduce to them. (RTP4)

I learned a lot about teaching when I taught this lesson to the class. I learned that most textbooks are very boring and the teacher has a big job in store when they try to make the book interesting. (RTP4)

She made important discoveries about flexibility and willingness to adapt, difficulties in communicating concepts to students, student retention of information, and the task of making textbooks interesting.

Future goals. Deloris stated that her goals are basically opposite from how she was taught during elementary school (AS). She planned to use activities that encourage learning because she was not encouraged to learn in school. She felt that this lack of encouragement was responsible for her being one of the few from her high school class to graduate.

Deloris also stated that she had set goals and plans to use positive reinforcement and to have some type of punishment style set up for her class. She would not say

what style of punishment she would use in the future because "all students are different and what may work with one student may not work with another" (PA).

Joyful experiences. Deloris made several statements that signified happy moments in her experiences. These statements suggested Deloris not only felt "learning should be fun" for the students but that learning should be fun and enjoyable for the teacher as well.

I love to teach. (JN)

I feel good about my lesson. I feel that the students had a learning experience through my lesson, and was able to add to their previous knowledge and learn new material that they could relate to. (RTP4)

Today went very well, I LOVED TEACHING!!!! (JN)

I love children. When I see a child I smile from ear to ear. I love to just watch children. Children are the future of the world, and I wish to make the best future possible. (AS)

The class even worked quietly and were not behavior problems. This made me feel GREAT! It proved my point that if the students are given a challenging activity they are more apt to work harder and therefore be less disruptive. Overall, I LOVED TODAY. I guess this is how days in school go. (JN, Nov. 13)

Proposition 3: Process of organizing and reflecting

Reflective papers. Although the class was repeatedly informed that lead questions were only for probes and that they were encouraged to deviate from them. Deloris always followed each set of questions in sequential order. She either numbered each response according to the given

questions or wrote in essay form addressing each item in the same order as on the handout.

Journal. Deloris regularly wrote in her journal approximately one-half page each day. She began most entries by identifying a particular event and followed it with a discussion, reaction, or feeling. She seemed to feel remorseful when she could not write as much as she wanted because of other obligations and time constraints. Her October 1 entry stated, "I wish I had a lot of time to just write in my journal, but I have a unit plan, word recognition, books to read, and also educational psychology to read. I must go!".

Deloris capitalized words in her journal and reflective papers when she wanted to emphasize them--"I LOVED TEACHING", "GREAT", and "I had NO IDEA WHAT TO DO". Interestingly, each of the capitalized entries referred to joyful or confusing moments.

Proposition 4: Examining teaching through reflective papers and journals

Changes. Deloris identified attitudes and teaching strategies as specific changes she would make if she could repeat the Reflective Teaching and internship lessons taught.

I believe that some of basic ideas about teaching have changed after doing this activity. Before I would have given the students material that they needed to remember and expect them to be able to recall the material without any type of practice activity that develops their skills. (RTP3)

If I could go back and teach this lesson over, I would not change any of my teaching strategies. I feel that the students learn from one another and given the chance, they can actively learn the information.
(RTP4)

Questions, concerns, and dilemmas. Deloris shared a number of questions and concerns during the semester. The majority stemmed from discipline and classroom management situations in her internship classroom. Each time she addressed this concern she expressed frustration over difficulties in controlling the students.

I love to teach, I have no doubt about that - but these discipline problems are getting on my nerves. (JN)

I really believe that I am a good teacher, I just need some help on classroom management. Hopefully, I'm making too much out of this and my class is really not that bad, or different from anyone else's class.
(RTP4)

Today was especially difficult because Suzie and I took the class out to Ms. Snow PE class, and they were totally unmanageable. I had NO IDEA WHAT TO DO! They would do everything they possibly could do to aggravate Ms. Snow. (JN)

The bulk of my lesson was discussion between the students and myself or simply between the students, which created some problems to begin with. The students were not accustomed to being allowed to talk during lessons, and many of the students got out of hand when I gave them the opportunity to voice their opinion. The noise level in the class began to get out of hand during the independent practice part of the lesson, but they eventually settled down. (RTP4)

Do you have a sure-fire plan on how to control these students? (JN)

Deloris raised one question about the role of the teacher and motivation. "How or what do you do to get a child to do something when they will not even try?" (JN).

Deloris expressed concern for developing relationships, particularly race relations. "What do I do when a black student tells me that they do not have to listen to a white teacher?"

While the majority of Deloris' concerns related to her teaching experiences. She raised questions about the readings on one occasion, "I have read Chapters 6 and 7 and Chapter 6 is confusing. I hope in class tomorrow you will be able to make it better" (Chapter 6 dealt with the psychology of learning.) and about class on another.

Today's class was in some ways confusing, but after the discussions I think we finally figured out something. I wish I could easily comprehend this information, but, it is so confusing to me sometimes. I read the material and try to comprehend it, and as for today's information, I feel like I have. (JN)

Deloris seemed open about expressing her true feelings in her papers, especially in her journal, but also in the interview. Sometimes she implied a lack of confidence when she wrote thoughts such as, "Everything I have written I feel sounds stupid - but I feel that some of what I say has some very important truth in it (AS). Other statements expressed concern about her choice of profession, "I have so many goals and plans for my future - I just hope it will all work out.... My future is scary!" (JN). At one point, it appeared that Deloris had begun to question her chosen career.

When I was walking out to the playground with the class, one of the little girls asked me if I was sure I

wanted to teach, and I couldn't answer her. What does this mean? How do I know if I'm cut out to teach? Does anyone else worry about things like this, or am I the only one who thinks ahead? (JN)

Gwen

Proposition 1: Preservice teachers' beliefs and philosophies

Teacher Belief Inventory. Gwen strongly agreed or disagreed with half the items on Posner's inventory; 29 of 57 items. Gwen strongly agreed with the following items: 4, 5, and 8 relating to control; 23, relating to diversity; 32 and 34 relating to learning; 44, 45, and 47 focusing on school and society. Agreement with Item 45, "There is a great deal that is wrong with the public schools today, and one of my priorities as a teacher would be to contribute as much as possible to the reform of public schooling," was consistent with Gwen's autobiographical statement discussing why she chose the teaching profession. She stated, "I want to improve the quality of education being offered in this state." Agreement with Item 45 was also consistent with Gwen's journal entry in which she stated, "Our nation at present is on the path to becoming a second-rate country. Each year our standing in the world community slips. A high quality educational system is vital if we are to turn this decline around."

Gwen strongly disagreed with the following items: 1, 2, 6, 11, 18, 20, and 21 relating to control; 24, 25, 26,

and 29 relating to diversity; 31, 35, and 36 relating to learning; 46 and 49 focusing on school and society; and 53, 55, 56, and 57 regarding knowledge. Gwen's list of characteristics of an effective teacher was consistent with her disagreement with Item 6, "As a teacher I would rely heavily on the textbook and prepackaged materials, rather than trying to write and design my own."

Control, diversity, knowledge, school and society, learning, and the teacher's role were common themes in her reflections as noted in this section and subsequent sections.

Written assignments and interview. Gwen identified the following as characteristics she deemed important for an effective teacher and a successful classroom.

You must have an interesting and involving classroom. You must challenge your students to that next step. You can get them to take that next step by planning for success. By knowing your students you can correctly chose what degree of difficulty for the assignment.
(Interview)

In addition, she described an effective teacher as one who is enthusiastic, caring, open and warm toward students, prepared and organized, knowledgeable of subject matter, has a high energy level, develops varied and well-planned lessons, and wants to teach.

Gwen stated that she "believed in the importance of daily reading of quality children's literature" (JN). Gwen also expressed a belief in using behavior modification techniques. "I think behavior modification techniques are

very effective in the classroom. I plan to use them when I teach" (PA). In reflective teaching paper two, Gwen said that in order for teachers to know whether students understand concepts being taught, they need to be good listeners and observers.

In reflecting on her beliefs about students understanding of concepts, Gwen declared it more important for students to understand the concepts than to name the behaviors (RTP3). Later in her interview, she elaborated on this, "I don't think reciting a few names of things is very important. I think knowing what something means is more important than having a name for it."

Gwen addressed teaching strategies she believed were and were not successful in helping students understand concepts. "I don't believe that prodding from page to page is the way to teach math. Students can learn how to do all the pages without truly understanding the concepts behind the work" (JN). She believed personal worth is an important element to student motivation.

I feel the key to motivation in the classroom is for each student to feel worthwhile and that they are an important part of the classroom. In most classroom situations it is not difficult to see that students are valued differently. (JN)

Gwen also discussed the impact experience has on an individual's teaching.

You must teach to learn about teaching. It is a continual process of teaching and incorporating changes to meet the needs of your students. If you do not do this your growth as a teacher is stifled and the

possibility of your meeting all your students educational needs is limited. (RTP4)

Proposition 2: Preservice teacher's reflections on their experiences

Awareness and realization. After teaching the Reflective Teaching Lesson, Gwen's interview reflected on her awareness of the importance of knowing her subject matter and being prepared, a point she came back to in her journal. In addition, Gwen stated that she had come to realize, after a busy day in her internship classroom, that she would find it difficult to manage hands on activities if she did not have an assistant.

Meaningful lessons learned. Gwen identified several meaningful lessons that she had learned as a result of her internship and university classroom experiences.

I have learned that I do not want to teach in a school where students change classes. I want to be responsible for the learning of my students. (JN)

I have learned that the teachers do not really believe changing classes is best for the students. It interferes with managing discipline. Students leave work in other rooms, they leave pencils, and their books. While the teacher is trying to teach students are coming back to get their things. These young students are not ready for all this. (JN)

I learned that I should not make assumptions. I assumed they had paper. In the regular classroom I would have to be more careful to make sure the supplies were ready before beginning. I learned that I am much more comfortable as a teacher of children than adults. (RTP3)

Gwen talked about a weakness she had identified after teaching the Reflective Teaching Lesson.

I learned that I do not know how to write on the blackboard well. I can not judge how large to make the letters and still get my information on the board in an organized fashion.

Gwen discovered individual differences and diverse ways of approaching the same task as something meaningful she had learned. "In working with my daughter and son I learned how differently two people can approach the same problem" (RTP2).

Future goals. Gwen's future goals fit within the affective domain. She believed all teachers should set a personal goal to "create an atmosphere of love, acceptance, and a feeling of personal self-worth" (JN). After viewing the film Teacher of the Year, a film focusing on characteristics of an effective humanistic teacher, she set a personal goal for herself to incorporate the things she learned from the film in her classroom.

Gwen explained that her decision to be a teacher was influenced by her goal "to improve the quality of education being offered in this state" (AS) by being a "part of the solution of the problem of public education" (JN). While willing to work anyplace initially, she stated, "My goal is to get employed regardless of whether I like the situation and hopefully work to a place where I will be teaching in a school in which I like their philosophy."

Joyful experiences. Gwen did not share any joyful experiences. However, early in the semester, she identified

a content area that she looked forward to learning more about.

I am anxious to begin learning how to develop language arts/reading units using children's literature. I want to know how to manage different reading groups and what type of seat work would be beneficial to students at their seats. I want to learn what to teach in the area of phonics. (JN)

Proposition 3: Process of organizing and reflecting

Reflective Papers. When completing assignments that were accompanied by lead questions, Gwen recounted the events as they were presented on the handout. She either numbered each response according to the given questions (RTP2) or wrote in essay form while still addressing each numbered item in the same order as on the handout (RTP3). Her papers were organized in the same manner as her journal; mostly description of an event followed by a brief comment about feelings and perceptions.

Journal. Gwen wrote from one-half page to two and one-half pages in her journal each day. Like her reflective papers, most of her journal entries focused on recall of actual events, with less focus on her feelings and perceptions. When she shared feelings and perceptions, they usually were a few statements at the end of a long description of an actual event that occurred.

Proposition 4: Examining teaching through reflective papers and journals

Changes. Gwen reflected on things she would do differently if she were to repeat the Reflective Teaching Lesson.

If I were to teach this lesson again I would do more research on the information to be presented. I would put the terms and mnemonic device on poster board. I would request more time to discuss the terms, as a group, to develop greater understanding. (RTP3)

I would have more time to discuss it. I would change the intent of the lesson to one that is more content oriented instead of factual. And truly try to make it more meaningful for students. (Interview)

Gwen also commented on the first reflection in her journal and interview in discussing the importance of planning and preparing prior to teaching a lesson.

Questions, concerns, and dilemmas. Gwen had few questions, and those were mostly related to curriculum. She pondered when reflecting on teachers trying to decide upon a reading program, "Will you use the basal? If you do, how will you expand their literature based reading, how will you develop units that have a variety of activities? How will you teach skills? Will you teach the skills from the basal?".

Except for the above questions, Gwen only wrote one question in her journal that sought a response. She asked, "How do you make a child feel worthwhile?" (JN). She ventured an answer in her October 3 journal, "In the classroom you can create an atmosphere of love, acceptance, and a feeling of personal self-worth."

Gwen expressed two areas of difficulty that she was faced with during the semester; both dealt with the teaching process, one in relation to her internship experience the other her Reflective Teaching experience.

It is difficult to plan for two separate days in the week. I feel I would be more sure of my suggestions at this point, if they were for follow-up the next day. I can't quite visualize what needs to happen the day after. (JN)

It is very difficult to teach your peers on a subject on which you do not feel you are an "expert". (JN)

Jacqueline

Proposition 1: Preservice teachers' beliefs and philosophies

Teacher Belief Inventory. Jacqueline strongly agreed or disagreed with over half the items on Posner's inventory; 31 of the 57 items. She strongly agreed with items 4, 5, 9, 17, and 19 relating to control; 22 and 23 relating to diversity; 32 and 34 regarding learning; 39, regarding the teacher's role; 41, 44, and 47 relating to school and society; and 48 and 51 focusing on knowledge. These items did not appear to be supportive or contradictory to other beliefs expressed in her journal or her interview.

Jacqueline strongly disagreed with the following items: 6, 11, 15, 16, and 20 relating to control; 25, 26, 27, 28, and 29 relating to diversity; 31 and 36 regarding learning; 38 regarding the teacher's role; 43, relating to school and society; and 56 and 57 relating to knowledge. Jacqueline

seemed to have inconsistent perspectives regarding external sources of motivation. She strongly disagreed with Item 36, "I would use grades to motivate learning"; yet, in Project A, when wrestling with developing a successful motivational strategy to use with the students in her internship classroom, she wrote, "I think tokens might help them as a class to earn treats."

Jacqueline believed the "best motivation comes from within and that is what teachers should try to guide children to achieve through letting them make their own choice and suffer the consequences" (JN). She also believed that teachers have to be mindful of all types of learners when attempting to enhance intrinsic motivation.

You have to take all types of learners into consideration. You have to motivate them to want to gain the information on their own. (AS)

The knowledge and school and society issues did not appear in any of Jacqueline's writing or in the interview. Diversity, control, learning, and the teacher's role were common themes in her reflections as noted in this section and subsequent sections.

Written assignments and interview. Both Jacqueline's autobiographical statement and interview, reflected a belief that successful teachers are those who are caring, enthusiastic, well prepared, flexible, have a high energy level, plans interesting and challenging lessons, possesses the ability to reflect, and gives clear directions.

Jacqueline believed that experience gives meaning and purpose to one's teaching and learning.

Being in the classroom has been the most valuable experience. The theories and the how to's are great but you have to have lots of experience to be effective. I think you also have to want to be effective - you have to be concerned about what you are doing. (JN)

Jacqueline also expressed several people-oriented statements regarding her beliefs and philosophies.

I don't think that the school can or even should take the place of the home, but the teachers influence on a child is great and damage done by an unthoughtful teacher really goes deep. We should be building kids up not tearing them down. (JN)

So many things we learn in school are so unrealistic to what we will face in the classroom. I still say the biggest problem is meeting the needs of all students. In accommodating the low level and being able to take the accelerated above and beyond. (JN)

Proposition 2: Preservice teacher's reflections on their experiences

Awareness and realization. During the interview, Jacqueline acknowledged in the interview that she had come to realize that one of her main weaknesses was that she was too lenient on the students. She felt this tendency extended from her mannerism with her own children. She stated, "I need to work on trying to build more independence into children. I like to do too many things for them. It's easier that way!"

Meaningful lessons learned. Jacqueline recounted several meaningful lessons she had learned during the semester, mainly during the internship. These meaningful

lessons focused mainly on class procedures and the teacher's role. They were as follows:

I learned from this experience that I need to slow down, and not give the children so much to do. I also learned that I could be an effective manager with more practice and more authority. If it were my own class, I would act differently because I would set the rules, not someone else. (RTP4)

Today I learned the importance of planning ahead, being organized, and having all materials ready before the lesson! (JN)

I have learned one thing - these children do not work well independently or in small groups. They have no self control. I learned today the importance of having very explicit directions and lots of activities to do or you have chaos. (JN)

Issues addressed in meaningful lessons learned included pacing, control of students, planning ahead, giving clear directions, and variety of activities.

Future goals. Jacqueline declared her most important goal was to "meet the educational needs of all students in the classroom" (AS). She stated that she had a goal of being a motivator to students.

Joyful experiences. Two journal entries reflected joyful moments, each in reference to an internship experience. Jacqueline stated, "My first day at Kenly was great. I love the teacher and the children. It was very positive." She referred to the school setting and her joy in being there again by stating, "I feel comfortable and needed, and I love the children. It is so gratifying to help a child discover something - it outweighs the garbage teachers put up with."

Proposition 3: Process of organizing and reflecting

Reflective Papers. Jacqueline wavered between ways of presenting her reflective papers. Reflective papers one and two were basically brief essays, while reflective paper four and Project A were numbered and outlined. The outlines, however, were a combination of the items given on the accompanying handout and Jacqueline's own framework. Regardless of how she presented her information, Jacqueline focused more on describing what happened than on reflecting about her perceptions of what happened.

Journal. Jacqueline wrote short, vague entries. The longest entries were one-half page; usually she wrote a short paragraph, and sometimes only one sentence. She frequently underlined words that she wanted to emphasize in her journal entries. Jacqueline emphasized a dislike for keeping a journal.

I didn't like writing the paper because I'm always thinking to myself "Is this the right exercise to use?, Is this the right activity to use?, Are they really getting this?". I think that way all along anyway. I hate to sit down and write about the activity that I did, because I'm thinking about it anyway. And to sit down and write it, I don't like to do. I don't like to keep journals. (Interview)

Proposition 4: Examining teaching through reflective papers and journals

One of Jacqueline's biggest and most consistent sources of anxiety, was fear that students would take advantage of her because she was too lenient. She mentioned this fear several times in her journal and in her interview.

JaneProposition 1: Preservice teachers' beliefs and philosophies

Teacher Belief Inventory. Jane strongly agreed or disagreed with 23 of the 57 items on Posner's inventory. She strongly agreed with three items relating to control, 1, 3, and 9; one item relating to diversity, 22; two items regarding learning, 34 and 35; one item regarding the teacher's role, 40; two relating to school and society, 45 and 47; and one item focusing on knowledge, 48. Jane's agreement with Item 22, "I would employ multiple and diverse criteria to evaluate learners. It is not fair to use the same criteria to evaluate all learners," supported her belief that teachers need to use various teaching strategies to meet the needs of the diverse makeup of students in each classroom.

Jane strongly disagreed with the following items: 2 and 6, relating to control; 24, 25, 26, and 29 relating to diversity; 31, 33, and 36 relating to learning; 54, 55, 56, and 57 focusing on knowledge. Jane disagreed with Item 25, "One of the main problems in classrooms today is diversity among pupils"; however, in her journal she addressed the difficulties she had experienced because of the diversity in both her internship and the university classroom.

Disagreement with Item 36, "I would use grades to motivate learning," was consistent with Jane's journal

entry, "grades are not my motivating force.... I believe teachers need to try to motivate students for the sake of the learning and knowledge gained, rather than external rewards such as stickers all the time." In addition, Jane stated, "To help children develop their full potential, I feel elementary education needs to de-emphasize grades and emphasize the individual's progress" (AS).

The control, knowledge, and school and society issues did not appear in any of her writing or in the interview. Diversity, learning, and the teacher's role were common themes in Jane's reflections as noted in this section and subsequent sections.

Written assignments and interview. Jane stated that she did not have a clearly defined philosophy regarding discipline, "I probably know more about what I do not want to do than what I do want to do (JN)", but knew she did not believe in humiliating children.

Jane identified experience as an important element of the teaching and learning process. "Teaching encompasses so much more than I ever imagined. It is certainly not something that can be learned just from a book. You need to do it and experience it too!" (RTP3).

Jane believed learning is a life-long process.

I think you learn all your life and I don't want them [students] to think that its just in the schools that they learn, they learn everywhere and they'll learn when they come out of school. Before they were in school they were learning, they're always learning.
(JN)

She felt good teachers should be open to the notion of learning as a life-long process as well as to the idea that "learning is fun." She thought teachers should be able to relate to children, recognize their differences, and be sensitive to their needs.

Proposition 2: Preservice teacher's reflections on their experiences

Awareness and realization. Jane emphasized a concern and awareness of the diversity among students in her class when she stated, "observing the various abilities of the children made me aware of the difficulties involved with teaching such a mixed group" (JN). Furthermore, she experienced this difficulty when she taught her Reflective Teaching Lesson. After teaching the lesson, she realized that her lesson would have been more suitable for all students if she had used some colorful posters to "stimulate the visual learners." Her awareness of diversity among students also surfaced after completing Project B.

I enjoyed discussing and looking at the various learning and personality types today. Seeing the variety of personality types in our class reinforced the notion that no two people are alike. It also brings to light the challenge involved in teaching a class with so many different personalities and learning styles. Most of all though, it reinforced for me once again that people do not always fit into specific categories. (JN)

Jane began to see the relationship between theory and practice during her experiences in the university classroom.

During our discussion of Piaget's theories today, it suddenly hit me that I would be getting the opportunity

very soon to apply his theories. I had learned about his theories many times before in my other classes. However, at the time, I was not really able to do anything with the information except maybe apply it to my children when appropriate. (JN)

Meaningful lessons learned. The communication activity brought a new awareness for Jane, that sometimes it is important not to give too many details when explaining and giving directions. She stated, "It is important to give just the right amount of information when trying to relay a message; this means not saying too much or too little" (RTP1).

During the interview and in reflective paper three, Jane explained that she had learned "how incredibly self-conscious" she was when being observed. According to her, my presence and the video-camera made her very uncomfortable. Her behavior while teaching the Reflective Teaching Lesson expressed this self-consciousness. She periodically looked over where I was sitting, she made several whispering remarks about the camera, and she appeared anxious during the lesson. In spite of her self-consciousness, she successfully taught the lesson and appeared to realize observations are a necessary evaluation element in schools.

Jane became increasingly aware of the need to match teacher behavior to the situation and teaching strategy to the task.

From my internship experience, I can only conclude that positive reinforcement and modeling are more effective

applications of behavioral learning than punishment. However, I have also learned that there is no one specific application of behavioral principles that is 100% effective all the time. Therefore, teachers must be flexible and adjust their methods according to their students and the situation. (PA)

I have learned that the kind of content to be taught really does determine the teaching method to be used. My lesson required a model in which you describe and demonstrate a skill and then provide the students with lots of opportunities to practice the skill. Other lessons, such as the problem solving lesson (the freckled man etc.) require a very different kind of teaching method. The teacher needs to guide students along much more. Problem solving seems to be a lot more difficult to teach as well. (RTP3)

Issues addressed in meaningful lessons learned included relationship of content and teaching strategies, effective behavioral modification techniques, and teacher flexibility.

Future goals. Jane stated two goals in her autobiographical statement; "to nurture children's natural curiosity and to guide them in their discovery of new things" and "to help all children develop to their full potential." She believed that the latter should be the overall goal of elementary education. Jane wanted to help children develop specific traits such as "high self-esteem, basic academic skills, critical thinking skills and creative impression."

Jane set two personal goals to work on; to build up her confidence level so she would not be self-conscious when being observed, and to think of different ways to give praise. She also made plans to encourage cooperative learning in her classroom.

Joyful experiences. During Jane's interview, she expressed that teaching the Reflective Teaching Lesson made her feel that "teaching is quite a bit of fun." This was the only statement made by Jane that expressed joy. However, she mentioned several things in her journal that amazed her.

It never ceases to amaze me how different everyone processes information.

I was truly amazed by how well this went (tour to grocery store on thanksgiving).

It is amazing how even simple things like making a turkey out of paper plates can be botched up.

Issues addressed in things that amazed Jane included classroom procedures, teaching strategies, and individual differences.

Proposition 3: Process of organizing and reflecting

Reflective Papers. Jane's reflective papers consisted of summations of the events that took place followed by her feelings and perceptions regarding the events. She did not follow the lead questions but included everything identified plus additional information.

Journal. Jane usually wrote one page in her journal each day. Like her reflective papers, she began with a brief summary of the events, and followed with her reactions.

Proposition 4: Examining teaching through reflective papers and journals

Changes. The one feature Jane expressed she would change, if she could repeat any of the semester's activities, was the Reflective Teaching Lesson. She stated that if she could reteach that lesson she would use more manipulatives such as blocks and posters to accommodate her visual and kinesthetic learners.

Questions, concerns, and dilemmas. Jane explained her concern of not being a creative person. She stated that she had always believed teachers need to be creative; yet, after a few visits to her internship classroom she had come to realize that "a lot can be learned from others. Once you are exposed to creative ideas, new ideas are stimulated." This realization seemed to ease her concern somewhat.

Discipline was another area Jane was concerned about. However, it appeared Jane's biggest dilemma stemmed from her lack of confidence. She mentioned in reflective teaching papers three and four that, when events did not go as planned during her lessons, she either "lost her train of thought" or "became flustered."

Consequently I became flustered and could not think quickly enough what to do instead that would still be effective. (RTP4)

As a result, I lost my train of thought quite a few times. This can be attributed mostly to my self-consciousness and my lack of confidence. (RTP3)

MaryProposition 1: Preservice teachers' beliefs and philosophies

Teacher Belief Inventory. Mary strongly agreed or disagreed with approximately half the items on Posner's inventory; 27 of the 57 items. She strongly agreed with approximately one-third of the items: Items 1, 3, 4, 5, 15, and 17 relating to control; Items 22, 23, and 28 relating to diversity; Items 32, 33, and 34 regarding the teacher's role; Items 42, 44, 46, and 47 focusing on school and society; and Items 48 and 51 relating to knowledge. Agreement with Item 44, "As a teacher I would be concerned with changing society," was consistent with her autobiographical statement and interview where Mary discussed her desire "to make a difference" and "to change things" in education.

Mary strongly disagreed with three items relating to control, 10, 11, and 20; four items relating to diversity, 24, 25, 26, and 29; one item focusing on learning, 31; and one item focusing on school and society, 43. Mary's disagreement with Item 43, "I would not participate in local activities when it involved criticism of local school authorities," appeared to vary from the perspectives shared in her interview. Where she heavily stressed the feeling that schools are too bureaucratic and that teachers need more freedom.

Mary believed as long as we continued to try to improve, we continued to learn. She wrote, "It is when we stop trying to improve that we stop learning" (RTP4). Mary felt that teachers need to have an intrinsic motivation in order to encourage students to want to learn. "If these kids (students in internship class) are to learn for learning sake, I must be intrinsically motivated" (JN).

The control, knowledge, and diversity issues did not appear in any of her writing or in the interview. Learning, control, school and society, and the teacher's role were common themes in her reflections as noted in this section and subsequent sections.

Written assignments and interview. Mary listed the following characteristics as qualities of a good teacher; enthusiastic, flexible, builds self-esteem, respects students, is prepared for any event, and thinks on his or her feet. Mary appeared to really feel grounded in the belief that a teacher needs to be able to think on his or her feet because she continuously stated it.

In reference to good teaching, she noted, "good teaching to me is one that requires the students' involvement. Teaching is two-sided. - we teach and learn as the children teach and learn" (JN). The notion of children teaching and learning was consistent with other journal entries that emphasized the importance of student involvement.

Mary believed relationships between the teacher and students influenced how much students learn. "How much students learn depends a great deal on how well they get along with their teacher. A relationship that must be fostered" (JN). Mary believed that teachers are tested frequently. "I now hold the view that much of what prospective teachers are put through is to test their mettle and desire to teach" (AS).

Proposition 2: Preservice teacher's reflections on their experiences

Awareness and realization. Mary seemed to gain a sense of affirmation toward her conviction to be a teacher as she encountered various experiences during the semester. She stated, "The more experiences I have with the schools, the more I become convinced that I want to be a teacher" (JN). On the same accord, Mary stated, "I have never believed teaching to be an easy task and now I am convinced of it" (RTP3).

After teaching the Reflective Teaching Lesson, Mary wrote,

I believe myself to be a flexible teacher, a strong point, but my major weakness to be overcome is my lack of ability to recover from a failing methodology. I disliked this teaching experience not because of the lesson or the requirement of making a presentation in front of others, but because I know my error could have been avoided with more careful preparation of materials. (RTP3)

Meaningful lessons learned. Mary identified several aspects of instructional delivery and assessment as helpful insights gained from her teaching experiences.

As a teacher, this activity taught me a couple of things. First of all, the likelihood of having a group of mindreaders for a class is nil and I cannot structure my instruction that way. Secondly, when explanations are given in response to a question, do not merely rephrase your words. Find out what segment of the lesson or what word threw the student off and then approach the problem. Many battles have been lost due to action without proper background information, education is no different. (RTP2)

Through this experiment and the in-class discussion I have learned one thing. The tests may not always be right on target. They offer, however, a rough guideline as to how to approach instruction for the individual if need be. The tests have value if they are used as a means to an end and not the reverse (PB).

Future goals. Mary's goal, to "teach students skills and thinking ability as well as to teach them that they can make a difference" (JN), implied a sense of commitment to the total student.

Joyful experiences. After teaching her first lesson to the students, Mary wrote, "The children, however, made me thrilled to be up there trying to teach them a new concept. I can't wait until I get to do it again" (JN). Her eagerness was still apparent in mid-November when she wrote, "Today I felt more like a real classroom teacher than ever.... I may not have done any instruction but I still felt I was an integral part of the classroom. I enjoyed it."

Proposition 3: Process of organizing and reflecting

Reflective Papers. When completing course assignments, Mary was brief but reflective. She did not follow the given handouts for any of the activities completed. Nevertheless, her papers were informative and reflective of her feelings, perceptions, and reactions; instead of limited recall of what actually happened.

Journal. Mary's journal entries were approximately three-fourths of a page long. Like the reflective papers, her journal entries focused more on reactions, feelings, and perceptions of events than on recounting of actual events.

Proposition 4: Examining teaching through reflective papers and journals

Changes. Mary discussed the change in two ways. First, she discussed change in reference to making a difference. One of her stated reasons for choosing a career in teaching was to try and change things in the school systems. She felt that schools are too bureaucratic and that teachers are constrained and have little freedom in the classroom. She also discussed change from the perspective of making adjustments in classroom procedures or teaching strategies.

If I were to do the activity again, I would clarify my choice of words by stating alternate understandings, i.e. sharp in shape not sensation of touch. (RTP2)

A poster would aid the presentation as would a copy of the practice problem for each student to follow along with as the task was solved. Throughout the lesson, this one point became clear. (RTP3)

I believe the lesson would have proceeded more smoothly if either the teacher had arranged to be out of the room for part of the time or, as a professional courtesy, had let me attempt to deal with both the lesson and the class on my own. (RTP4)

Questions, concerns, and dilemmas. Mary raised several questions after her first observation of a child throwing a temper tantrum.

I wonder how this child has been able to handle school up to this level? Has he been like this all along or is 3rd grade the catalyst. I have the feeling he should have been recommended for testing earlier and I wonder why he hasn't. The sooner the problem is diagnosed and treated, the sooner the child benefits. (JN)

Mary was concerned about motivating students after they have lost their motivation. "My main concern is: How can you turn kids "back on" to school if at the primary level they're already turned off?" (JN).

The dilemma Mary wrestled with the most was the ability to gain control of her internship classroom. According to her November 18 journal entry, her cooperating teacher interrupted her teaching frequently to discipline students who were off task. Mary really seemed to resent this interruption and truly wanted to have full control of the classroom, including handling discipline problems.

PatriceProposition 1: Preservice teachers' beliefs and philosophies

Teacher Belief Inventory. Patrice strongly agreed or disagreed with 15 of the 57 Posner items. She strongly agreed with three items relating to control, 4, 5, and 14; two items relating to diversity, 22 and 23; one item focusing on learning, 35; and three items focusing on school and society, 44, 45, and 47. Patrice's agreement with Item 22, "I would employ multiple and diverse criteria to evaluate learners. It is not fair to use the same criteria to evaluate all learners," and Item 23, "If I taught classes that differed with regard to learners' academic ability, I would teach them differently," are in accord with comments she made in Project B with regarding the importance of recognizing personality traits and how students learn. Patrice felt it was important to be aware of and sensitive to individual personality differences.

Teachers need to pay close attention to students reactions to classroom practices and to their performance on a variety of activities and then form an opinion of the methods best suited to individual students. It is essential, however for any teacher to be aware of the many facets of human personality and how these traits affect the ways in which we learn. Then if problems develop in the performance of individual students, it should be first considered that the methods used may be ineffective for that student rather than immediately assuming that the material is beyond them. Teachers should also be aware that occasionally a "bad match" occurs between a teacher and a student and it may help to vary his/her teaching methods or styles in order to reach that student. (PB)

Patrice's agreement with Item 44, "As a teacher I would be concerned with changing society," is supported by her reference to children as our future in her autobiographical statement. The component of Patrice's autobiographical statement that expressed her desire to make a difference alluded to her support and agreement with Item 45, "There is a great deal that is wrong with the public schools today, and one of my priorities as a teacher would be to contribute as much as possible to the reform of public schooling."

Patrice strongly disagreed with three items on control, 2, 6, 20; one item on diversity, 29; one on learning, 31; and one item relating to knowledge, 49. Patrice's disagreement with Item 6, "As a teacher I would rely heavily on the textbook and prepackaged materials, rather than trying to write and design my own," was consistent with her emphasis on the importance of creativity in the classroom in her autobiographical statement. Patrice's statement "Education should teach children to dig for information, formulate their own opinions, think critically, and make their own decisions, and to trust their instincts." (AS) supported her response of "strongly disagree" in reference to Item 20, "It is more important for learners to learn to obey rules than to make their own decisions."

Diversity, control, knowledge, learning, school and society, and the teacher's role were common themes in her

reflections as noted in this section and subsequent sections.

Written assignments and interview. Patrice described an effective teacher as one who is confident and listens, respects, and communicates with students. She believed education should teach students to find their own answers (AS). She saw teaching as a commitment. "I see teaching as a profession that demands dedication. Teachers must strive to give their very best or they can never expect their students to reach beyond the average" (AS).

Patrice believed that teachers must start with what children bring to the classroom.

To me, the most important factor in motivation is personal interest. If a teacher can focus on and capitalize on what children are already most interested in then the result will be more successful. Also, when you link new knowledge to prior learning you give students something to "anchor" the new information on to. (JN)

Patrice felt that it is important to build up self-esteem in students by helping them develop an "I can do it" attitude.

I think the most important thing that is not taught enough in the public schools or in the classroom or maybe the curriculum in the public schools is that "you can do it" and that individuals are unique and teachers need to get across the idea that no matter who you are no matter what your abilities, if you apply yourself, you can do it, you can achieve. (Interview)

Proposition 2: Preservice teacher's reflections on their experiences

Awareness and realization. After teaching the Reflective Teaching Lesson, Patrice stated that she had come to believe that her greatest strength as a teacher was her strong desire to see her students learn. In reference to the same lesson she also stated,

I felt that overall this was a valuable learning experience. It illustrated vividly how much outside preparation must go into a lesson in order for a teacher to maintain control and effectively facilitate learning, rather than confusion. I felt that I had prepared amply and yet I still became easily distracted and lost my train of thought. I do feel, however, that much of my confusion and uncertainty was due to my own mental block against these types of problems. (RTP3)

It helped me to see how important it is to be comfortable with your content before teaching a lesson. (JN)

Issues addressed regarding awarenesses and realizations included the importance of being prepared, organized, and comfortable with the subject matter.

Meaningful lessons learned. Perhaps the best summary for Patrice was her statement during her internship, "the more I learn, the more I realize I need to learn." Several of her reflections focused on instructional delivery skills and pacing.

Future goals. Having students become free from dependence on her was one of Patrice's main goals. She wanted her students to "be able to stand on their own two feet, be able to make decisions.... and see themselves as

unique and confident people." Confidence for students and teachers was also highlighted in her journal.

Patrice's most important goal was "for the students to be pleased and comfortable with the way I teach, and to learn the material well" (RTP3). She stated, "In my own future teaching, I hope to employ a "personal best" system in which children are taught to keep track of their own progress in their own personal journals" (PA).

Patrice made reference to being people-oriented. She stated, "It is my sincere desire to become an innovative teacher-one who challenges and inspires students to reach further and stretch the boundaries of society's expectations --as well as their own" (AS).

Joyful experiences. Patrice expressed amazement and thrill as she discussed her experiences during her internship; amazed at the range of abilities that existed in her class, and thrilled at how quickly most of the students caught on to the concepts she taught. Her journal reflections often expressed feelings of joy:

I really enjoyed the Keirseley Temperament Sorter and the Learning Styles inventory - I love things like that.
(JN)

The film on learning centers was great, if not a little overwhelming. It did seem like a lot of work but it was also obvious how meaningful all the work would be for the students. (JN)

First of all, I enjoyed the reflective teaching assignment even though I felt very uncomfortable with my particular lesson. (JN)

This wonderful film made me so glad that I've gone to all the trouble of going to school to become a teacher!
(JN)

Patrice's joyful experiences were not limited to one activity or concept. They included temperament and learning style activities, films, and Reflective Teaching Lessons.

Proposition 3: Process of organizing and reflecting

Reflective Papers. Patrice did not follow the lead questions to organize her reflective papers. Her papers were very reflective of her feelings and perceptions with adequate summations of the events that took place.

Journal. Patrice wrote approximately two pages daily. She organized her journal entries by first briefly discussing the event or situation followed by a more elaborate description of feelings, reactions, or perceptions regarding it. She often referred to topics or situations discussed in class. Patrice frequently underlined words to emphasize them.

Proposition 4: Examining teaching through reflective papers and journals

Changes. Patrice only made two statements regarding changes. One referred to the communication activity;

If I had done this activity again I would have given more carefully worded descriptions. I would have taken several minutes to study the object for key facets and distinguishing features; and then I would have planned and sequenced my statements so that my descriptions would have been clearer and more accurate. This is an important point for a future teacher to discover in such a concrete experience. (RTP2)

The other statement regarding change referred to the Reflective Teaching Lesson she taught. Patrice stated, "I would find a way to have some sort of game or practice problems during independent practice or maybe more guided practice to give them more confidence" (Interview). Both changes addressed the desire to present information in a manner that makes it clearer for students.

Questions, concerns, and dilemmas. Patrice's questions and concerns seemed to focus on motivating students to want to learn.

What can you do with a student like this? (in response to a student who never participated and seemed very uninterested in school and learning. (JN)

Obviously he does not lack intelligence but yet he feels overwhelmed by concepts such as indentation at the beginning of a new paragraph. Is it just that these "academic" things are irrelevant in his opinion and he doesn't want to learn them? or is there something seriously wrong with him such as attention Deficit Disorder? (JN)

It was not surprising that her concerns and questions would stem from this area since she stated in reflective paper three that one of her strengths as a teacher was the "desire to see students learn."

Patrice explained in her journal and reflective paper three that teaching the Reflective Teaching Lesson was a struggle for her. She had difficulty understanding, and therefore teaching the lesson, even though she had practiced it several times before teaching it to her small group.

According to her, the root of her problems was that she has never been good at solving word problems.

Patrice appeared to be very sensitive and conscientious. Several of her journal entries expressed struggles with feelings of disappointment because of negative comments or actions displayed by her classmates or students in her internship. In reference to her classmates, Patrice wrote,

Unfortunately, the only comments I have to make today regarding Educational Psychology are somewhat negative. I was disappointed to hear that several people in my discussion group did not enjoy the temperament and learning styles activities....nonetheless, I was surprised to hear how many people did not see the value of temperament and personality testing in education.
(JN)

I was so disheartened when I left class on Wed. The atmosphere of hostility and back-biting competition is getting to me. (JN)

In reference to students in her internship class, Patrice wrote, "I was disheartened to see that the one boy who is totally inattentive in class was still completely disinterested in the field trip. It seems that nothing sparks this kids interest" (JN). The disheartening situations all addressed break down or deterioration of relationships.

SharonProposition 1: Preservice teachers' beliefs and philosophies

Teacher Belief Inventory. Sharon strongly agreed or disagreed with 21 of the 57 items in Posner's inventory. She strongly agreed with one item relating to control, 4; one item relating to diversity, 22; one item regarding learning, 34; two items regarding school and society, 45 and 47; and two items focusing on knowledge, 48 and 51. She corroborated her sense of agreement with Item 22, "I would employ multiple and diverse criteria to evaluate learners. It is not fair to use the same criteria to evaluate all learners," in Project B when she stated, "It is important to know the learning styles of the students in a classroom before designing teaching methods. If a particular method is not suited to the child's learning style, chances are the child will not learn the material."

Sharon strongly disagreed with the following items: 6 and 11 relating to control; 24, 25, 26, 27, and 29 relating to diversity; 31 and 36 regarding learning; 43 focusing on school and society; and 49, 54, 55, and 57 relating to knowledge. Disagreement with Item 36, "I would use grades to motivate learning," showed a discrepancy in Sharon's beliefs. In her journal, she expressed agreement with external motivation as long as it was applicable and

accessible to all students and was not the only motivational strategy.

Sharon showed a sense of holding a conditional belief regarding extrinsic motivation. In her journal, she stated, "I agree with external motivation, things like stickers, candy, etc. The big thing is that we must be mindful of excluding students from rewards." In Project A, she wrote, "I believe that teachers should not rely completely on extrinsic motivation. I think that at the intermediate level children should also have developed some intrinsic motivation, and I think that teachers must try to capitalize on that aspect of motivation as much as possible."

Regarding Item 43, "I would not participate in local activities when it involved criticism of local school authorities," Sharon's disagreement implied she would be willing to take a stand for students and education. This supported her belief statement that "the most important aspect of education is the children."

She stated, "But when it comes right down to it, the most important are the children. Their needs and well being should come before CAT and SAT scores" (AS). Experience was also believed to be important to Sharon. "I do not think one experience or 1000 experiences will tell me all I need to know about teaching. I know I will learn everyday and that it will not always be easy. But I think this is the real beauty of teaching" (RTP4). Later in Sharon's

interview she said that regardless of the number of experiences a teacher has, he or she continues to learn throughout life.

Disagreement with Item 57, "I would teach the knowledge of different subject areas separately, because important knowledge is overlooked when subjects are integrated," supported Sharon's advocacy for integrating the curriculum. In her interview, Sharon stated that teachers need to integrate subject matter knowledge; as well as, operative knowledge.

The control and school and society issues did not appear in any of Sharon's writing or in the interview. Diversity, learning, knowledge, and the teacher's role were common themes in her reflections as noted in this section and subsequent sections.

Written assignments and interview. Sharon believed the most important attributes of a teacher are to care about his or her students and to have the desire to teach, "you have to want to be there. Other positive teacher attributes offered by Sharon included being well prepared, organized, having command of subject matter, being professional, and a good model for students.

In addition, Sharon believed it is the teacher's responsibility to teach students content knowledge as well as survival knowledge.

I think the teacher ... is there as a guide for the students, to educate the students in book sense, but

also life sense I guess you could call it. I think you have to integrate that and that's supposed to come through the way you act. (Interview)

Sharon believed schools should have support groups. "I think every school should have support groups for talking out problems such as this, not only for beginning teachers, but for all teachers!" (JN).

Proposition 2: Preservice teacher's reflections on their experiences

Awareness and realization. Sharon's journal entries reflect several realizations as a result of her experiences. First, Sharon discussed how she had come to realize the importance of journal reflections after witnessing her internship teacher handle a discipline situation.

Second, in reference to reflecting, Sharon stated,

I never thought reflective teaching was anything you had to teach. I just thought that automatically you couldn't be successful if you didn't think about what you had done and how you could have done it better. I never thought that a teacher would teach and not think about what she could have done differently. That's why we were always talking about reflecting teaching, I thought that was just general standard part of everything. Cause I didn't know that some teachers might not do that, but evidently there are teachers out there who don't. I mean I always planned to do that. I didn't know that it had to be a skill to teach someone. (Interview)

Third, after a busy day in her internship class, Sharon stated that she had come to realize "how much of a disciplinarian [she] could be." Finally, Sharon discovered that she had "serious math phobia" after teaching a lesson

during her internship. She stated, "I feel very uncomfortable trying to teach math."

Another teaching practice Sharon became aware of after conducting a reflective activity was probing for answers. "I now realize after our reading that a teacher must always probe his/her students' answers. If I had asked her questions, I'm sure I would have located the flaws in my description" (RTP2). Sharon's reflective papers presented evidences that she had come to realize information about her teaching through her experiences. Reflective paper one expressed Sharon's realization that student involvement is very important. She stated, "Unless students are involved in the learning, you can't be sure if they are or are not learning.... it is important to give students hands-on experience so that they can internalize information and make it meaningful for them." Support for this concept appeared in her autobiographical statement, her interview, and reflective paper two.

Regarding individual differences, she realized that it is "important to know the learning styles of the students in a classroom before designing teaching methods that are not suited to the child's learning style, because chances are the child will not learn the material" (PB).

Meaningful lessons learned. After teaching the Reflective Teaching Lesson, Sharon stated, "One thing I learned about teaching is that teachers do not know

everything about what they teach." Later in her interview, she expressed the same belief and the importance of a teacher having "command of the subject matter."

After teaching the Reflective Teaching Lesson, Sharon stated that she had "learned that teachers have to improvise when materials are not readily available. They have to come up with ways of achieving the same outcome with learners with what they have rather than always depending on some flashy, expensive resources."

Future goals. Sharon stated that one of her goals as a teacher was to have "active, excited and interested" students who enjoyed learning. In addition, she expressed that she wanted to "foster a learning process in which children explore and discover on their own (AS and Interview)". Sharon stated, "I want to make learning fun and I want my students to be involved in it." After many experiences in her internship on discipline, Sharon set a goal to become more skilled at being a good disciplinarian.

Proposition 3: Process of organizing and reflecting

Reflective Papers. Reflective paper two was the only paper completed by Sharon in which she organized it according to the order of the lead questions. Her other papers were more reflective of her feelings, perceptions, confusions, and reactions. Her reflective papers were brief and to the point.

Journal. Sharon's journal entries also focussed more on insights, feelings and reactions. She wrote approximately one page each day. She frequently began with a brief description of an event or situation followed by an elaboration of perceptions, feelings, and reactions.

Proposition 4: Examining teaching through reflective papers and journals

Changes. Sharon addressed two kinds of change; change in attitude or beliefs, and change as an adjustment. Sharon changed her attitude and beliefs regarding difficulties of being a creative teacher and modifying lesson plans.

Before I had this experience, I thought teachers who did teach to the test were just too lazy to be creative. Now I see it is not that easy or simple. (RTP3)

The only belief I changed about teaching was about compromises in lesson plans. It is unbelievable how fast times flies. It is impossible to fit everything that you want to do or could do into any lesson. Therefore, you have to compromise, modify, or even leave some things out. (RTP4)

Referring to change as an adjustment, Sharon stated that she needs to encourage more questions when she teaches (RTP2). In addition, she expressed the desire to encourage students to draw their own conclusions from activities. Again, this emphasized question asking or posing. After teaching the Reflective Teaching Lesson, she wrote, "I knew what I wanted the students to get out to the lesson but I told them rather than letting them come to these conclusions

themselves. If I had to pick one thing to change about the lesson, that would be it" (RTP3).

In reference to the same lesson, Sharon stated that if she had to teach the lesson again she would use visual displays "because some of my students may have been more visual learners than verbal learners" (Interview). Sharon's realization that visual displays would have improved her lesson and made it more appropriate for the visual learners supported her belief that emphasis needs to be placed on recognizing and accommodating different learning styles.

Questions, concerns, and dilemmas. Sharon had questions regarding testing students; mainly teaching to the test without teaching the test.

Your students have to know what is on the test, but how to do that without hindering creativity or teaching fact after fact without the big picture? (RTP3)

How do you handle it if you test and discover the whole class doesn't understand? (JN)

The most prevalent dilemma that Sharon appeared to be struggling with was "fear". She frequently wrote about her fears and anxieties. She was afraid of being rejected by the children. "I am so afraid of being rejected by the children....Most of the time I was scared of failing" (JN). Anticipation of student teaching frightened her.

Student teaching is only a month away. I realize that I haven't been anxious to ask to do it either. That really scares me. Am I overly nervous, or am I beginning to question my chosen profession? Is it time for soul searching? ADVICE PLEASE! (JN)

Sharon was also afraid of not being able to communicate her lessons to the students.

I'm afraid that I'll walk into a classroom and appear to speak Russian. It felt good to know that I could explain something in at least partially understandable terms. (RTP2)

What if no matter what I say, I still do not come through clearly to the children? I think the hardest part of my job will be teaching material in terms the children can understand. (AS)

The only thing I am afraid of is talking down to the kids. I feel that I might talk to them as if they were babies. (JN)

I am always afraid that I can not find the right words to explain a concept clearly, which is probably why I feel as if I stumbled over my words. I can not seem to discern whether I actually can not explain or whether it is simply a phobia. (RTP3)

Overall, these fears seemed to center on questioning whether she would be a good teacher.

A final dilemma expressed by Sharon was audibility. She was soft-spoken and wrestled with raising her voice to an appropriate classroom level without appearing to be shouting.

Between Subjects Analysis

All the subjects had some teaching experiences; even though most of them were minimal. Gwen had the most experience in public school because she worked as a teacher's assistant for a year.

When asked why they chose the teaching profession in their autobiographical statement assignment; four of the six

subjects stated they always wanted to teach; Mary, Sharon, Patrice, and Jane. Deloris and Gwen stated they chose teaching in order to make a difference. Even though Patrice expressed that she had always wanted to teach, she also stated she wanted to "do something with her life that would make a difference" (AS). Deloris discussed how she had a horrible elementary school experience and therefore chose teaching in order to make things better for other students (AS).

Proposition 1: Preservice teachers' beliefs and philosophies

Teacher Belief Inventory. Responses for the seven subject's Teacher Belief Inventory (TBI) were charted for analysis. Their responses were compared for commonalities and differences in relation to the 57 assertions on the TBI questionnaire. Responses to each assertion ranged from all the subjects giving the same response to the subjects' responses varying across all possible choices. (See Appendix B for complete chart of class' responses.) Six of the seven strongly agreed with Item 29 relating to diversity, and Items 31, and 34 relating to learning.

(Table 3)

Items 50, "Students in high school don't spend enough time on the 'basic' subjects," and 52, "My subject matter is more a body of content than it is a set of skills to be mastered" were the only items for which all the subjects responded with major qualifications. The students either

responded, "disagree but with major qualifications" or "agree but with major qualifications." All of the subjects, except one, gave this same response to the following items: 10, 12, 13, 19, and 21 relating to control; 30 and 37 relating to learning; 39, 40, and 42 relating to school and society; and 53 relating to knowledge. (See Table 3)

Five items yielded the full range of responses: Item 28, which dealt with diversity in the classroom to meet the individual needs of all the students; items 33 and 38, which dealt with the learning environment established by the teacher; items 41 and 46, which dealt with views regarding the integration or separation of school and society. There were no items in which the students were completely on opposite ends of the response spectrum; "strongly disagree" versus "strongly agree".

For several items, all the subjects responded "strongly disagree" or "disagree but with major qualifications." For example, Items 11 and 20 relating to control, 24 regarding to diversity, 36 regarding learning, and 43 relating to school and society. Each of these items, excluding Items 11 and 20, reflected the students taking a stand on something they believe in by saying "I would do...." On the other hand, Item 11 addressed whether the principal or department chairman should or should not determine how and what a teacher should teach. With the exception of one, all the

TABLE 3

Summary of Responses to Posner's Teacher Belief Inventory Items=====

Posner TBI Items That Subjects Checked "Strongly Agree"

- *29. I would lower my expectations regarding academic performance for those learners who come from economically disadvantaged backgrounds.
- *31. I would use the comparison of one learner's work with that of another as a method of motivation.
- *34. I would tell my students exactly what was expected of them in terms of behavior, homework, and lesson objectives.

=====

Posner TBI Items That Subjects Checked "Agree but with Major Qualifications" or "Disagree but with Major Qualifications"

- 10. Parents and other community members should have the right to reject schools books and materials.
- 12. What I teach will probably be heavily influenced by statewide or district wide standardized tests.
- 13. As teacher my primary task would be to carry out the educational goals and curricular decisions that have been formulated by others.
- 19. I would allow learners to go to the bathroom at just about any time.
- 21. I would encourage learners to speak spontaneously without necessarily raising their hands.
- 30. One of the most important tasks I would face as a teacher is developing individuals into a good working group.
- 37. The sheer interest in learning something new and challenging or of successfully accomplishing a task usually supplies sufficient motivation for learning.
- 39. As a teacher I would tell learners a great deal about myself.
- 40. I would serve more as a group facilitator than as a transmitter of information.
- 42. Schools and youth groups should seek to help all learners to fit as smoothly as possible into our present society.
- *50. Students in high school don't spend enough time on the "basic" subjects.
- *52. My subject matter is more a body of content than it is a set of skills to be mastered.
- 53. One of the primary purposes of teaching my subject matter is to develop good work and study habits.

=====

Posner TBI Items With A Full Range Of Possible Responses

- 28. I would probably do most for learners who want to learn.
- 33. I would lead learners through a series of easily mastered steps in such a way that the learners make as few errors as possible.
- 38. I would start out as a strict disciplinarian and gradually become more approachable as the learners come to respect my authority.
- 41. My political beliefs have no place in my teaching.
- 46. The home backgrounds of many learners are the major reasons why those children do not succeed in school.

* Represents items in which all students unanimously agreed upon.

subjects gave this response to Items 16 relating to control, 25 and 26 regarding learning, 54, 55, and 57 focusing on knowledge. (See Table 4) There were fourteen items that at least six subjects either responded, "agree but with major qualifications" or "strongly agree." (See Table 4)

As a class (n=33), the most frequently chosen response was "Agree but with major qualifications". Approximately fifty percent of the time, this response was chosen. At least seventy-five percent of the class gave the same response for Items 4, 7, 8, and 14 regarding control, 22 relating to diversity, and 31 regarding learning. Regarding Item 4, the majority of the class strongly agreed that parents would have the right to visit their classroom as long as they had prior notice. The majority of the class agreed but with qualifications that learners should have input in scheduling and selection of assignments. Concerning Item 14, the majority of the class agreed but with qualifications that they would give learners options for deciding what to study. In regards to Item 22, "I would employ multiple and diverse criteria to evaluate learners. It is not fair to use the same criteria to evaluate all learners" at least seventy-five percent of the students responded, "strongly agree". Finally, Item 31, "I would use the comparison of one learner's work with that of another as a method of motivation" was strongly disagreed upon by the majority of the class. There were no items in which the

TABLE 4

Summary of Responses to Posner's Teacher Belief Inventory Items=====

Posner TBI Items That Subjects Checked "Strongly Disagree" or "Disagree but with Major Qualifications"

- *11. The principal or my department chairman should ultimately determine what and how I should teach.
- 16. Parents should be involved in hiring teachers for their children's school.
- *20. It is more important for learners to obey rules than to make their own decisions.
- *24. I would not expect learners from economically disadvantaged backgrounds to assume the same degree of responsibility for their learning as learners from more economically advantaged backgrounds.
- 25. One of the main problems in classrooms today is diversity among pupils.
- 26. There should be set standards for each grade level and subject, and as a teacher I would evaluate all learners according to these standards.
- *36. I would use grades to motivate learning.
- *43. I would not participate in local political activities when it involved criticism of local school authorities.
- 54. Schools today pay too much attention to the social-emotional needs of children, and not enough emphasis is given to academic skill development.
- 55. I would emphasize teaching the 3 Rs more than the skills of problem solving.
- 57. I would teach the knowledge of different subject areas separately, because important knowledge is overlooked when subjects are integrated.

=====

Posner TBI Items That Subjects Checked "Strongly Agree" or "Agree with Major Qualifications"

- 1. I would encourage parents to work with me inside the classroom.
- *4. Parents would have the right to visit my classroom at any time if they gave me prior notice.
- *5. I would consider the revision of my teaching methods if these were criticized by the learners.
- 14. I would give learners some options for deciding what to study.
- 17. I would be involved in administrative decisions in my school or organization (e.g., allocating the school's budget, hiring staff).
- *22. I would employ multiple and diverse criteria to evaluate learners. It is not fair to use the same criteria to evaluate all learners.
- *23. If I taught classes that differed with regard to learners' academic ability, I would teach them differently.
- *32. People learn better when cooperating than when competing with one another.
- 35. Since people learn a great deal from their mistakes, I would allow learners to learn by trial and error.
- *44. As a teacher I would be concerned with changing society.
- *45. There is a great deal that is wrong with the public schools today, and one of my priorities as a teacher would be to contribute as much as possible to the reform of public schooling.
- *48. It is as important for learners to enjoy learning as it is for them to acquire specific skills.
- 51. Most high school courses try to cover too much material, thereby sacrificing real understanding.

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* Represents items in which all students unanimously agreed upon.

class's responses were evenly or close to evenly distributed.

Written assignments and interview. It appeared all of the students have affirmed beliefs and philosophies about teaching and learning; some seemed to state more beliefs, some were more consistent in expressing their beliefs. They all expressed beliefs regarding characteristics of an effective teacher. All identified an effective teacher as one who motivates students to want to learn. All, except one, addressed the importance of recognizing individual differences among students. The majority of the subjects stated that a good teacher needs to be flexible, communicate with students, plan and prepare lessons well, be knowledgeable of subject matter, and care about students. Lessons that are challenging, interesting, has variety and hands on activities were also stressed. Jacqueline and Deloris addressed the importance of a teacher having the desire and willingness to teach. Mary felt teachers need to be able to think on their feet.

All of the subjects discussed teacher's roles and learning issues in their papers and journals. All subjects, except two, discussed the diversity issue.

Proposition 2: Preservice teachers' reflections on their experiences

Awareness and realization. Most of the students became aware of personal concerns and of their strengths and

weaknesses. Mary became convinced that she wanted to be a teacher, Jacqueline realized that she is too lenient with the children, and Sharon realized the importance of reflecting on your teaching.

Deloris expressed that she had come to realize that pacing and classroom management were her areas of weakness. Patrice said her greatest strength was her strong desire to see her students learn.

Meaningful lessons learned. The students learned many different things from their experiences during the semester; some more than others. Some general learnings include: teaching is hard, teachers don't know everything, and planning and organization is important. Personal learnings dealt with difficulty of writing on the board, self-consciousness, and pacing a lesson.

Future goals. It appeared all of the subjects had set goals for themselves as future teachers. Many of their goals stemmed from things they had come to realize during the semester. Five of the seven subjects made goal statements in their first journal entry.

Joyful experiences. With the exception of one, all the subjects shared joyful experiences. Most of these experiences took place in their internship class, and were expressed by comments such as "I love the children," "I LOVE TEACHING," "I love the teacher and the children," "I love being in the classroom," and "learning is fun."

Proposition 3: Process of organizing and reflecting

Reflective Papers. The seven subjects varied in organization of reflective papers, from following the lead questions for most papers to totally creating their own format. Gwen and Deloris followed the lead questions for each of their papers. They either numbered each paragraph to correspond with an item from the lead questions or they wrote an essay type paper but still addressed each question from the handout in the same order. Of the two, Deloris shared more reactions than recall of events. Sharon followed the lead question format for one of her papers (reflective paper two), but created her own format for her other papers.

Mary, Jane, and Patrice did not follow the lead questions for any of their papers. They each started with a brief summation of an event that took place followed by an elaboration of feelings, perceptions, and reactions regarding it.

Jacqueline was the only who did not seem to stay with any particular manner of organizing. Two of her papers were outlined according to the lead questions and the other two were formed as essays with no indication of an outline.

Gwen and Jacqueline were the only subjects who focused more on describing the events that took place than sharing their reactions to them.

Journal. The average length for daily journal entries was one page. Yet, the entries ranged from one sentence to two and one-half pages long. Patrice wrote the longest entries and Jacqueline the shortest. Overall, organization of journal entries was consistent with organization of reflective papers.

Jacqueline was the only subject who appeared uncomfortable with keeping a journal. In fact, she discussed her dislike for journal keeping in her interview. The one sentence to one paragraph length of her journal entries was also indicative of her dislike for journal keeping.

As a means of placing emphasis on a word or phrase, two techniques were used; capitalization and underlining. Deloris was the only subject who frequently capitalized words to emphasize them while Jane and Patrice frequently underlined them. However, Sharon used both techniques to emphasize words.

Proposition 4: Examining teaching through reflective papers and journals

Changes. The activity that prompted the most comments about things they would change if they could repeat an activity was the Reflective Teaching Lesson. The changes mentioned included things such as use more manipulatives and display props, and use a more creative gimmicky teaching approach.

Deloris, Gwen, and Patrice talked about changes from another perspective. They reflected on how they want to teach in order to make difference and help solve problems of public education. Deloris and Patrice also expressed their love for teaching throughout their papers and journal.

Questions, concerns, and dilemmas. The majority of the questions and concerns dealt with managing student behavior. However, Gwen and Patrice were concerned about finding ways to motivate students. Gwen also had questions about making curriculum decisions.

The dilemmas students wrestled with ranged from classroom management to disheartening attitudes. Deloris, Gwen, and Mary's greatest dilemma appeared to be classroom management. Jane, Jacqueline, and Sharon struggled with more personal dilemmas. Jane's dilemma was a lack of confidence, while Jacqueline and Sharon's was fear of failing with the students. Patrice struggled with negative attitudes. She frequently expressed her own disappointment caused by students' and peers' negative attitudes.

Summary of Subjects

This section explores whether differences in temperament and learning styles relate to content and organization of written papers and interviews. The four temperaments included the free spirited Dionysian, the bound

and obligated Epimethean, the analytical Promethean, and the self-actualizing Apollonian.

The four learning styles were the Actual-spontaneous learner (ASL) who learns by doing, the Actual-routine learner (ARL) who likes order and predictability, the Conceptual-specific learner (CSL) who enjoys developing intellectual skills and critiquing, and the Conceptual-global learner (CGL) who focuses on self-actualization and developing relationships. (See charts on pages 49 and 50 for additional information about temperament and learning styles.)

Patrice, Mary, and Jacqueline had an Apollonian Temperament Type. Sharon and Gwen were Epimetheans while Jane and Deloris were Prometheans. With regard to learning patterns, Deloris, Patrice, Jacqueline, and Mary had a Conceptual-global learning pattern. Sharon had an Actual-routine Learning Pattern, while Gwen had a Conceptual-specific one. Jane was the only subject who had a double learning pattern. Her learning pattern tied between Conceptual-global and Conceptual-specific. Neither of the subjects were of the Dionysian temperament type.

The following discussion examines the process of reflection used by each subject against learning style and temperament.

Deloris

Consistent with Deloris' Conceptual-global learning style, she expressed concern for developing relationships. Her emphasis on the diversity of students was consistent with her learning style's emphasis on possibilities in people.

Deloris stated that she had learned some of the difficulties of teaching and some of her personal strengths and weaknesses. These lessons learned were consistent with the self-actualization characteristic of her Conceptual-global learning style. She provided varied and much needed information to allow all students to reach their highest potential.

Conceptual-global learners tend to like variety, meaning and significance, and imagination. These elements are often hard to find in a traditional basal; therefore, it was not surprising that Deloris felt most textbooks are boring.

Characteristics exhibited by Deloris that were consistent with her Promethean temperament type included her focus on preplanning punishment of the students. This alluded to the power and control and the future-oriented aspects of her temperament. The fact that the majority of Deloris' questions, concerns, and dilemmas, were in reference to discipline and classroom management in her internship classroom also implied a need for control and power.

Deloris' tendency to be fearful about her future and to refer to the future in several other instances indicated that she was future-oriented. This too was consistent with her Promethean temperament.

Her tendency to follow a pattern or outline when writing her reflective papers and journal entries implied she organizes in a sequential orderly manner and she is comfortable with that format, another characteristic of the Promethean temperament. Being open to changes and new ideas was also consistent with the Promethean temperament.

Gwen

Consistent with Gwen's Epimethean temperament, she wanted to "make a child feel worthwhile." Gwen had an interest in the personal aspects of children and wanted to help build up their self-esteem as well as educate them. Epimetheans tend to want to develop high inner standards of improvement, implying a sense of intrinsic motivation. She recognized the importance of individual differences and did not want to compare students as a method of motivation or for any other purpose. Consistent with the Conceptual-specific learner, Gwen exhibited the desire to develop intelligence.

Gwen's concerns for writing on the board properly exhibited a sense of valuing accuracy, a characteristic of the Epimethean temperament. Her realization of the

importance of being prepared was consistent with the Epimethean's tendency to plan, prepare, and practice.

The fact that Gwen disliked changing classes was consistent with Epimetheans liking of stability, order, and routine. Gwen only identified two things she would change in her teaching. She developed a routine early on, and stayed with it.

The structure and routine organization of Gwen's papers was consistent with her Epimethean temperament and the technical details and categorizing was consistent with her Conceptual-specific learning style.

Gwen found it difficult to predict or plan for more than one day when planning ahead. This is contrary to what one would predict from either her temperament or learning style.

Jacqueline

Like Deloris, Jacqueline was another Conceptual-global learner. Her writings and interview contained people-oriented statements regarding her beliefs and philosophies. She had a commitment to students as individuals, and a desire to develop relationships with her students. Jacqueline's journal entries stressed the importance of enjoying teaching and loving the children. She was also interested in her own self-actualization, consistent with both her Apollonian temperament and her Conceptual-global learning style.

Jacqueline struggled with several aspects of her teaching. She acknowledged that she was too lenient with the children, and expressed that she needed to improve in this area. Recognizing areas that need improving exemplifies her Conceptual-global learning style's value on self-discovery and understanding self.

Jane

Jane focused on issues relating to life-long learning, a perspective consistent with a Conceptual-global learning pattern. Her comments suggested a love of learning, also consistent with the Promethean temperament's love for intelligence.

Agreement with Item 40, "I would serve more as a group facilitator than as a transmitter of information," implied a sense of "lets learn together." This point is supported by her interest in good communication and relating to students.

The consistency between the format of Jane's papers and journal implied that giving a brief summary followed by an elaboration of feelings and perceptions was her natural way of thinking and addressing situations. Jane's manner of processing and organizing her feelings was inconsistent with what was expected for a Promethean.

Jane's self-consciousness about being observed is consistent with the Promethean temperament, as are her future-orientation and her conscientiousness about meeting the needs of all students.

Mary

Consistent with the Conceptual-global learning style, Mary believed in developing relationships. She stated, "I believe in peaceful solving of conflicts if at all possible. I believe in doing everything we can to save our environment and I believe in a respect for all forms of life in all its stages" (AS).

Other characteristics consistent with the Conceptual-global learner included the notion that the teacher needs to be a part of making lessons meaningful and significant for students, seeing possibilities in people (the children), and being future-oriented.

Disagreement with Item 43 regarding school and society, implied that she would not be willing to take a stand against schools even though she felt they need improving. This inconsistency was surprising considering the tendency Apollonians usually have on being future-oriented and having a sense of mission.

The consistency in the way Mary's reflective papers and journal were organized suggested that focusing on feelings, perceptions, and reactions instead of recall of actual events was her natural way of processing and organizing information. This manner of organizing was not surprising for a student possessing the Apollonian temperament because of their tendency to focus on self-discovery.

Patrice

The negative attitudes of classmates and students in the internship classroom may have disappointed Patrice because both her temperament and learning style value developing relationships.

Patrice's emphasis on building up self-esteem can be one way of helping students to reach a level of self-actualization. Self-actualization and being people-oriented were characteristics of the Apollonian temperament. Concern about personality differences was also consistent with Patrice's Apollonian temperament. Apollonians' hunger for unique identities; therefore, it would be expected an Apollonian teacher would strive to be mindful of the unique identities of his or her students.

Sharon

Consistent with the Epimethean temperament and the Actual-routine learner, Sharon emphasized planning and responsibility to students in her reflections.

Sharon discussed fears that seemed to be centered around questioning whether she would be a good teacher. The fact that Sharon named characteristics of a good teacher showed she was aware of what needed to be done in order to be successful; nevertheless, she was afraid of failing.

Sharon agreed with some aspects of external motivation and disagreed with others. Her writings implied that she believed in using extrinsic motivation as long as it wasn't

the only means of motivation and all students have the opportunity to be successful and receive the rewards. Nevertheless, the implication for this split in beliefs may be indicative of Sharon's own uncertainties regarding external motivation.

Synthesis of Posner's Issues with Writings and Interviews

All of the subjects discussed learning and teachers' roles in their papers and interviews. They reflected on characteristics of an effective teacher such as motivation, challenging lessons, knowledge of subject matter, planning and preparation, recognizing individual differences, and having an enthusiastic attitude toward teaching.

All the subjects, except Mary, discussed diversity in the classroom. They identified the importance of teachers recognizing different learning styles of students and meeting the needs of all students by using varied teaching strategies.

Gwen, Mary, and Patrice were the only subjects who mentioned school and society in their papers or interviews. Each of them expressed the desire to make a difference and change things in schools in hopes that that will have an impact on society. The knowledge issue was addressed by Gwen, Patrice, and Sharon.

It is important to note that students completed Posner's TBI the first week of the course, therefore, their

responses indicate student's initial perspectives on teaching and learning. If the inventory had been completed later in the semester or after student teaching responses probably would have been quite different. On the other hand, the temperament and learning style inventories' responses probably would not have deviated far from what they were at the beginning of the semester.

Issues Addressed in the Reflective Papers and Interviews

Sharon was the only subject who did not discuss classroom management in her papers or interview. Deloris and Jane frequently mentioned that positive reinforcement should be used in the classroom. Gwen brought out a different factor relating to discipline; she felt that students changing classes interfered with discipline. Mary discussed frustration with her cooperating teacher's tendency to interrupt the class and discipline students before she had an opportunity to. Classroom management is an issue that is typically a concern for beginning teachers.

Motivation was discussed by all the subjects. Mary and Deloris addressed the motivational responsibilities of the teacher. Deloris believed the teacher's motivational responsibility was to make learning fun, while Mary believed the teacher needed to have an intrinsic motivation. Mary and Jane addressed the need for students to learn for the sake of learning.

Deloris was the only subject who discussed concerns she had about her decision to be a teacher and race relations. Jane was the only subject who mentioned Piaget's theories and cooperative learning.

Most of the subjects shared joyful experiences that they encountered during the semester; most of these experiences occurred in the internship classroom. Deloris, Jane, and Sharon believed learning should be fun.

The diversity among issues addressed by students of the same temperament and learning style are not consistent with what would be expected. If results were consistent with research on temperament and learning style, students with the same temperament and learning style would focus on similar issues, organize in similar ways, and use related approaches to reflective teaching activities. The data reflected this.

CHAPTER V
FINDINGS AND IMPLICATIONS

The purpose of this study was to examine the process preservice teachers use when completing activities designed to promote reflection. This chapter presents general findings and conclusions, assertions made based on the issues, and implications for further study.

General Predictions, Findings, and Conclusions

Korthagen concluded that some students might not benefit from reflective teaching while others would readily respond to it. One might predict that the most reflective students would have an Apollonian temperament and a Conceptual-global learning style. These learners' value for discovering and understanding self are most consistent with self-examination of their own teaching. Patrice and Mary were the most reflective subjects. Both possessed the temperament type and learning style consistent with the prediction.

Students who possessed an Actual-routine learning style and an Epimethean temperament might be expected to be least reflective because they like rules and routine. They tend to organize in a sequential structured fashion. Gwen and

Jacqueline were the least reflective subjects. Gwen had an Epimethean temperament and a Conceptual-specific learning style, while Jacqueline possessed an Apollonian temperament type and a Conceptual-global learning style.

A second issue relates to Golay's matching temperament and learning style. Gwen's temperament and learning style are not parallel as one would expect according to Golay. If Golay is correct, she should have an Actual-routine learning style. No one is a pure type, in either temperament or learning style. We all have aspects of all the types within us. This study simply highlights the complexity of categorizing temperament and learning style. We can not automatically assume we know learning style if we know temperament and vice versa. The study also points out that two individuals with the same temperament and learning style can often respond very differently as evidenced by Patrice, Mary, and Jacqueline.

Korthagen's research also suggest that students would use various approaches to the reflective activities. Students who appeared to already have a reflective orientation should be expected to write papers that were reflective of their feelings, perceptions, and reactions early-on in RTP1. It might be assumed that students who were not naturally reflective would base their reflective papers on details of events or situations instead of feelings, perceptions, or reactions in RTP1. The question

then is whether they would change the nature of their reflections with increased instruction and practice at reflectivity. This was generally the case. Regardless of the student's original reflective orientation, all students improved their level of reflection with the use of lead questions.

It is uncertain whether the students' papers were more reflective when they followed the lead questions because they were just following directions or because they had become more reflective. The lead questions gave probes to guide their reflections. Cruickshank's Reflective Teaching model is based on the use of guide questions and specific activities such as the Reflective Teaching lessons that give the students something specific to reflect on but does not tell them how to reflect.

Results of this study show evidence that lead questions do not hinder the students from reflecting in the way that is natural for them. Those students who were not inclined to reflect in an orderly restricted manner used the lead questions to probe their thinking but deviated from them quite frequently. This suggests that Cruickshank's Reflective Teaching model is beneficial to a wide range of preservice teachers' natural reflection style and is not just a technocratic approach as claimed by some (Gore, 1987). The activities are tools in the reflective process instead of end products.

Age did not appear to be a factor in the students' approaches to reflective teaching. No consistent patterns of approaches toward reflective activities were distinguished among traditional and nontraditional students. This could have been due to the fact none of the students had much teaching experience.

Data gained from reflective papers seemed to imply agreement with Bliss and Bloom's notion that the integration of educational theory and classroom practice enables student teachers to think critically about the purposes of schooling and their objectives as educators. Knowledge gained from RTP3 supported Ross' belief that the topic of the paper influences the level of reflection demonstrated. Most of the students enjoyed teaching the Reflective Teaching lessons and wrote very reflective papers on that activity.

No evidence was found to support Korthagen's speculation that differences in learning orientations may be caused by the belief systems and theories students have about learning. It appears students have beliefs and theories about learning but they are not influenced by their learning orientation nor are they focused on the same issues.

The varied lengths of journal entries and attitudes toward journal keeping implied support for Richards et al.'s belief that prospective teachers differ in their willingness and abilities to reflect about teaching. It appeared some

had a natural ability and willingness to examine and question their teaching while others struggled with this process. However, there did not appear to be a consistency between characteristics possessed by students in these two categories.

Assertions Made Based on Issues and Literature

It appears that preservice teachers have affirmed beliefs about teaching and learning but that their beliefs do not influence the way they reflect on their teaching. Nevertheless, their beliefs seem to influence what the students reflect on. For example, students who believed management of student behavior was an important issue, often wrote about management and control in their papers. This finding does not support Korthagen's belief that differences in learning orientations may be caused by belief systems and implicit theories students have about learning.

Encouraging students to reflect on their teaching experiences appears to enhance their ability to learn from their experiences. Teacher-directed or lead questions guided reflective papers to include more statements of perceptions and feelings. Reflective papers that lacked lead questions were more likely to just summarize what had happened without any reflection. This was true for all of the students in the class, not just for those selected for the case study. When specific lead questions were provided,

reflective papers became a reflection of what they thought about as they taught the lesson or conducted the activity, what feelings were present, their reactions to the lesson or activity, what the experience meant to them, and what they came to understand as a result of conducting the given activity.

Perhaps it is only necessary to use teacher-directed or lead questions with students who have an external orientation during the initial stages of introducing reflective teaching. This study did not include a direct measure of internal or external orientation, but the addition of the Keirsey-Bates Temperament Type Inventory would permit that analysis. The fact that students' papers were more reflective papers as the semester progressed implied that students can learn to be more reflective even if it is not their natural way of thinking. By the time students wrote reflective paper four, on the lesson they taught in their internship classroom, the majority of the students focused more on perceptions and reactions than on recall of what happened during their lesson. They focused on their planning process, feelings they had while teaching, things that went well during the lesson and things that did not, what was meaningful to them, and what they would do differently if they could do the lesson again.

This study also implies that it is possible to enhance students' skills in reflecting without encouraging them to reflect in a way that goes against their natural way of thinking. The fact that students varied in the extent in which they used the given lead questions implied they did not feel restricted and were able to reflect in the way that was natural for them.

Writing reflective papers and journals seems to affect how the students evaluate and learn from their teaching experiences. In their writings, students expressed questions and concerns they had, things they had learned or come to understand or realize, and fears and frustrations they had about teaching and learning. Students seemed to self-examine their own teaching practices and thinking processes; as well as came to a better understanding of themselves as perspective teachers by examining their teaching experiences via their reflective papers and journals.

Implications for Further Study

Further work is needed in assessing students' reflective tendencies and abilities. Perhaps a closer examination of students over a long period of time would provide more concrete data. Possible personal dimensions that would be beneficial in examining students' beliefs and

philosophies on teaching and learning are cultural background, prior experiences, gender, and race. Examining these three personal dimensions could allow researchers to understand the foundation on which the students' beliefs and philosophies are formed.

Second, a follow-up study should be conducted on the subjects after they have taught for a year to examine the reflective processes being used. Practices exhibited in a classroom where the student is the authority figure and planner are likely to represent his or her true beliefs and philosophies.

Third, Posner's inventory should be administered to the students at the end of the semester to see if their perceptions have changed during the semester. This could serve as a moderator of internship experiences and programs' impact on students' perceptions.

Two implications for teacher training can be made as a result of this study. More programs need to be developed whereas a reflective strand runs throughout the program instead of being isolated to one or two courses. Reflection is a skill that needs nurturing for some students, therefore, a curriculum that promotes reflection throughout would benefit students who have an external orientation and enhance those who already have an internal (reflective) orientation.

Second, universities need to include public schools in their models for promoting reflection. This would educate and encourage cooperating teachers to emphasize reflection during student's internships and student teaching experiences.

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APPENDIX A

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Appendix A, 177-180

University Microfilms International

APPENDIX B

Class Responses To Posner's Teacher Belief Inventory Items

| Items | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
|-------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| ===== | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Students | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mary* | 4 | 3 | 4 | 4 | 4 | 3 | 3 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 4 | 2 | 4 | 3 | 2 | 1 | 3 | 4 | 4 | 1 | 1 | 1 | 3 | 4 | 1 |
| Jacqueline* | 3 | 3 | 2 | 4 | 4 | 1 | 3 | 3 | 4 | 2 | 1 | 3 | 3 | 3 | 1 | 1 | 4 | 2 | 4 | 1 | 3 | 4 | 4 | 2 | 1 | 1 | 1 | 1 | 1 |
| Delois* | 3 | 2 | 2 | 4 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 4 | 4 | 3 | 1 | 1 | 4 | 3 | 3 | 2 | 2 | 3 | 3 | 1 | 4 | 3 | 2 | 3 | 2 |
| Jane* | 4 | 1 | 4 | 3 | 3 | 1 | 3 | 3 | 4 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 4 | 3 | 1 | 1 | 1 | 3 | 3 | 1 |
| Patrice* | 3 | 1 | 3 | 4 | 4 | 1 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 4 | 4 | 2 | 2 | 2 | 3 | 3 | 1 |
| Gwen* | 1 | 1 | 3 | 4 | 4 | 1 | 3 | 4 | 2 | 3 | 1 | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 3 | 1 | 1 | 3 | 4 | 1 | 1 | 1 | 3 | 3 | 1 |
| Sharon* | 3 | 3 | 3 | 4 | 3 | 1 | 3 | 3 | 2 | 2 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 3 | 1 | 1 | 1 | 1 | 1 | 2 |
| Barbara | 3 | 2 | 4 | 4 | 4 | 1 | 3 | 3 | 4 | 3 | 1 | 3 | 3 | 1 | 4 | 1 | 4 | 3 | 1 | 1 | 3 | 4 | 1 | 1 | 1 | 1 | 1 | 4 | 1 |
| Tina | 4 | 2 | 4 | 4 | 4 | 1 | 3 | 3 | 4 | 3 | 1 | 1 | 2 | 2 | 3 | 1 | 4 | 3 | 3 | 1 | 2 | 4 | 1 | 2 | 1 | 2 | 2 | 2 | 1 |
| Denise | 3 | 1 | 1 | 4 | 3 | 2 | 3 | 3 | 3 | 1 | 1 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 4 | 3 | 1 | 1 | 3 | 3 | 3 | 1 |
| Marsha | 3 | 2 | 3 | 4 | 4 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 4 | 2 | 2 | 4 | 4 | 2 | 2 | 2 | 4 | 4 | 1 |
| Leah | 3 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 3 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 2 | 2 | 4 | 4 | 1 | 3 | 2 | 2 | 2 | 2 |
| Stephanie | 4 | 1 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 2 | 1 | 2 | 3 | 3 | 4 | 3 | 4 | 2 | 3 | 1 | 2 | 4 | 2 | 4 | 1 | 3 | 4 | 2 | 1 |
| Betty | 3 | 3 | 3 | 4 | 4 | 2 | 3 | 4 | 4 | 2 | 3 | 4 | 4 | 3 | 3 | 1 | 4 | 2 | 1 | 1 | 3 | 4 | 4 | 1 | 1 | 2 | 4 | 4 | 1 |
| Alice | 3 | 2 | 3 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 3 | 2 | 2 | 1 | 4 | 3 | 2 | 2 | 1 | 2 | 2 | 2 |
| Gayle | 3 | 2 | 4 | 4 | 4 | 2 | 3 | 3 | 4 | 4 | 2 | 4 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 |
| Mabel | 4 | 3 | 4 | 4 | 4 | 1 | 3 | 3 | 3 | 3 | 1 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 4 | 4 | 1 | 1 | 1 | 3 | 3 | 1 |
| Shirley | 3 | 2 | 4 | 4 | 4 | 1 | 3 | 3 | 4 | 3 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 2 | 4 | 4 | 1 | 1 | 1 | 2 | 2 |
| Annette | 3 | 2 | 3 | 4 | 4 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 2 | 4 | 4 | 4 | 4 | 1 | 3 | 3 | 2 |
| Janet | 3 | 2 | 3 | 2 | 2 | 1 | 3 | 3 | 2 | 4 | 1 | 2 | 3 | 3 | 4 | 1 | 4 | 1 | 1 | 3 | 1 | 4 | 4 | 3 | 4 | 3 | 2 | 1 | 2 |
| Shelia | 3 | 2 | 3 | 4 | 4 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 4 | 2 | 2 | 1 | 2 | 4 | 3 | 2 | 2 | 3 | 3 | 2 | 1 |

* Indicates Subject Responses

(Table Continues)

Class Responses To Posner's Teacher Belief Inventory Items

| Items | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
|----------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| ===== | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Students | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sally | 3 | 3 | 4 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | 2 | 3 | 1 | 1 | 1 | 4 | 1 | 1 | 2 | 1 | 4 | 3 | 1 | 1 | 1 | 3 | 2 | 1 |
| Susan | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 4 | 3 | 3 | 1 | 2 | 2 | 3 | 4 | 3 | 3 | 3 | 3 | 2 | 3 | 4 | 3 | 1 | 2 | 1 | 3 | 3 | 1 |
| Joanne | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 3 | 4 | 3 | 1 | 3 | 3 | 3 | 1 | 1 | 3 | 2 | 4 | 1 | 1 | 4 | 4 | 1 | 3 | 1 | 4 | 3 | 1 |
| Rhonda | 3 | 2 | 3 | 4 | 4 | 1 | 3 | 3 | 3 | 4 | 1 | 2 | 3 | 3 | 3 | 2 | 4 | 3 | 3 | 2 | 1 | 4 | 4 | 1 | 1 | 1 | 3 | 3 | 1 |
| Iris | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 1 | 2 | 4 | 3 | 1 | 2 | 3 | 1 | 1 | 1 |
| Tenecia | 3 | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 1 | 2 | 2 | 3 | 2 | 2 | 4 | 4 | 2 | 1 | 2 | 3 | 3 | 3 |
| Teresa | 3 | 1 | 3 | 4 | 3 | 1 | 3 | 2 | 3 | 3 | 1 | 2 | 3 | 3 | 2 | 1 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 2 | 2 |
| Maria | 3 | 3 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 4 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 2 | 3 | 4 | 3 | 2 | 1 | 1 | 4 | 4 | 3 |
| Louise | 4 | 2 | 3 | 4 | 3 | 1 | 3 | 3 | 3 | 1 | 2 | 3 | 2 | 3 | 4 | 4 | 1 | 2 | 3 | 1 | 1 | 2 | 4 | 1 | 2 | 3 | 4 | 2 | 3 |
| Jean | 3 | 1 | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 4 | 4 | 2 | 2 | 2 | 2 | 4 | 2 |
| Scarlett | 4 | 2 | 2 | 4 | 4 | 2 | 3 | 3 | 4 | 3 | 1 | 2 | 3 | 4 | 3 | 1 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 1 | 1 | 3 | 2 | 3 | 1 |
| Pam | 3 | 4 | 4 | 3 | 4 | 2 | 3 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 1 | 4 | 4 | 1 | 4 | 1 | 4 | 2 | 1 | 4 | 2 | 3 | 3 | 1 |

* Indicates Subject Responses

(Table Continues)

Class Responses To Posner's Teacher Belief Inventory Items

| Items | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 |
|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| ===== | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Students | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mary* | 2 | 1 | 4 | 4 | 4 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 4 | 1 | 4 | 3 | 4 | 4 | 4 | 3 | 2 | 4 | 3 | 2 | 2 | 2 | 2 | 2 |
| Jacqueline* | 3 | 1 | 4 | 3 | 4 | 3 | 1 | 3 | 1 | 4 | 3 | 4 | 3 | 1 | 4 | 3 | 3 | 4 | 4 | 2 | 3 | 4 | 3 | 2 | 2 | 2 | 1 | 1 |
| Delois* | 4 | 3 | 3 | 3 | 4 | 3 | 2 | 4 | 4 | 3 | 3 | 1 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| Jane* | 3 | 1 | 3 | 1 | 4 | 4 | 1 | 3 | 3 | 3 | 4 | 3 | 3 | 2 | 3 | 4 | 2 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 1 |
| Patrice* | 2 | 1 | 3 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 3 | 4 | 3 | 1 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 |
| Gwen* | 3 | 1 | 4 | 3 | 4 | 1 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 1 | 4 | 3 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 |
| Sharon* | 3 | 1 | 3 | 2 | 4 | 3 | 1 | 2 | 3 | 3 | 3 | 2 | 2 | 1 | 3 | 4 | 3 | 4 | 4 | 1 | 2 | 4 | 3 | 3 | 1 | 1 | 3 | 1 |
| Barbara | 4 | 1 | 4 | 3 | 4 | 3 | 3 | 4 | 4 | 2 | 1 | 1 | 4 | 4 | 4 | 4 | 4 | 1 | 4 | 1 | 1 | 4 | 1 | 3 | 1 | 1 | 3 | 2 |
| Tina | 4 | 1 | 3 | 3 | 4 | 4 | 1 | 3 | 2 | 3 | 3 | 4 | 3 | 1 | 2 | 4 | 3 | 3 | 4 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 2 |
| Denise | 3 | 1 | 4 | 3 | 3 | 4 | 1 | 4 | 1 | 4 | 4 | 1 | 4 | 3 | 4 | 2 | 2 | 3 | 4 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| Marsha | 4 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 4 | 3 | 4 | 4 | 4 | 1 | 1 | 2 | 0 | 2 | 1 | 2 | 3 | 1 |
| Leah | 4 | 2 | 4 | 3 | 3 | 4 | 3 | 4 | 2 | 3 | 4 | 2 | 4 | 2 | 4 | 4 | 3 | 3 | 4 | 2 | 4 | 3 | 3 | 4 | 2 | 2 | 2 | 2 |
| Stephanie | 2 | 1 | 4 | 2 | 3 | 3 | 2 | 3 | 2 | 4 | 2 | 3 | 2 | 3 | 4 | 2 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 3 | 2 | 2 | 1 | 1 |
| Betty | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 4 | 2 | 3 | 4 | 4 | 3 | 1 | 1 | 4 | 3 | 3 | 1 | 1 | 3 | 1 | 4 | 1 | 1 | 2 | 3 |
| Alice | 3 | 2 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 4 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | 2 | 2 | 2 | 3 | 3 | 1 | 2 | 4 | 2 |
| Gayle | 3 | 1 | 4 | 4 | 4 | 3 | 2 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 4 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 2 | 2 |
| Mabel | 3 | 1 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 1 | 4 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 |
| Shirley | 4 | 2 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 1 | 0 | 3 | 4 | 3 | 1 | 2 | 3 | 3 |
| Annette | 2 | 1 | 4 | 2 | 3 | 4 | 1 | 1 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 4 | 4 | 3 | 1 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 |
| Janet | 4 | 1 | 4 | 4 | 4 | 3 | 1 | 4 | 3 | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 1 | 1 | 4 | 4 | 4 | 3 | 3 | 4 | 2 |
| Shelia | 3 | 1 | 2 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 4 | 3 | 3 | 3 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 1 |

* Indicates Subject Responses

(Table Continues)

Class Responses To Posner's Teacher Belief Inventory Items

| Items | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| ===== | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Students | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sally | 3 | 1 | 3 | 3 | 4 | 3 | 4 | 1 | 4 | 1 | 1 | 3 | 4 | 4 | 4 | 4 | 1 | 3 | 3 | 1 | 1 | 4 | 3 | 3 | 1 | 1 | 3 | 2 |
| Susan | 3 | 1 | 3 | 3 | 4 | 4 | 2 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 4 | 3 | 2 | 4 | 4 | 1 | 2 | 3 | 3 | 3 | 2 | 1 | 2 | 1 |
| Joanne | 3 | 1 | 3 | 3 | 3 | 2 | 1 | 4 | 3 | 1 | 3 | 2 | 1 | 1 | 4 | 4 | 3 | 4 | 4 | 1 | 1 | 4 | 3 | 3 | 2 | 1 | 1 | 1 |
| Rhonda | 4 | 1 | 4 | 4 | 4 | 4 | 3 | 1 | 3 | 2 | 4 | 2 | 4 | 1 | 4 | 3 | 3 | 4 | 4 | 1 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 1 |
| Iris | 3 | 1 | 4 | 3 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 4 | 2 | 3 | 2 | 1 | 3 | 1 |
| Tenecia | 3 | 2 | 4 | 2 | 4 | 3 | 3 | 3 | 2 | 2 | 1 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 |
| Teresa | 2 | 1 | 4 | 3 | 3 | 3 | 2 | 4 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 4 | 2 | 2 | 3 | 2 | 3 | 1 | 2 | 1 | 2 |
| Maria | 2 | 1 | 4 | 4 | 4 | 4 | 1 | 4 | 4 | 3 | 3 | 4 | 4 | 2 | 4 | 4 | 3 | 3 | 4 | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 1 | 1 |
| Louise | 3 | 1 | 4 | 3 | 4 | 3 | 3 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 2 | 4 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 4 | 1 |
| Jean | 4 | 1 | 4 | 3 | 4 | 3 | 2 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 2 | 3 | 4 | 2 | 2 | 3 | 3 | 3 | 2 | 1 | 2 | 1 |
| Scarlett | 4 | 2 | 4 | 1 | 4 | 3 | 3 | 3 | 3 | 2 | 4 | 3 | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 |
| Pam | 3 | 1 | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 2 | 2 | 3 | 3 | 1 | 4 | 3 | 3 | 3 | 4 | 2 | 3 | 0 | 0 | 3 | 2 | 1 | 3 | 2 |

* Indicates Subject Responses

APPENDIX C

REFLECTIVE PAPER ONE
Communication Activity

This activity focuses on the importance of good teacher-student communication. For this activity, you are to choose a family member, friend, or acquaintance to work with you. Once you have a volunteer (subject) to help you with this project, then choose a common object that is unfamiliar to the volunteer. After completing these two things, proceed as follows:

- (1) Describe the object to the person while he draws it. (Describer can not look at what the subject is drawing while he is drawing it, nor can the subject ask any questions.)
- (2) Once you have finished describing the object and your subject has finished drawing his picture, look at what he drew without making any comments or allowing him to ask any questions.
- (3) Describe the object a second time based on what you perceive needs to be clarified to enable the subject to draw the object accurately. (At this time the subject can do a second drawing or just alter the first one.)
- (4) After the second drawing or alterations are completed, the subject is permitted to ask questions about the object. Yet, the questions have to be answerable with "yes" or "no". If the question is not phrased in a manner that can be answered "yes" or "no", you are to remind the person of the rules and ask him/her to rephrase it.
- (5) If your subject has not figured out what the hidden object is by this point allow him to feel it without looking at it. If necessary he may draw object again based on how it felt or alter his previous drawing.

The objective of the activity is for the subject to be able to guess what the object is based on the drawings he constructs from the description presented to him. Therefore, anytime during the activity, the subject can guess what he/she thinks the object is. Once he/she has figured out what the object is, the activity is completed.

After the activity is completed, you are to write a paper explaining briefly what happened and your feelings and perceptions about it.

APPENDIX D

REFLECTIVE PAPER TWO
Teacher Directed Questions

Using the following questions as lead questions to probe your thinking, write a second paper based on the Communication Activity you conducted.

1. Choose the session that was more insightful for you and write an introductory paragraph on the person you conducted the activity with. Include; first name, approximate age, occupation, and relation to you (friend, spouse, child, etc.) You may also include any additional information about this person that seems important to you in reference to this activity.
2. What was your approach to get the subject to participate? Did you have to persuade him/her? Did the subject participate just because you asked him/her? Was the subject truly interested? etc. If the subject was reluctant, how did you get him/her to participate?
3. Did you tell the subject all the rules/instructions before starting the activity or as you went along? Was the fluency of the activity affected by the way you stated the rules and when they were given. If you had done this differently, how could it have helped you or the subject?
4. Indicate the person's reaction when he found out he couldn't ask any questions until later. (A look of "This is silly", frustration, or no expression, etc.) Did you address this look or ignored it?
5. Briefly explain what happened during the session as you went from on description and drawing to the next. Include drawings.
6. When you finished the activity and allowed him/her to explain what s/he was thinking and interpreting while doing the drawings, did it help you to see what you could have said differently to make it clearer? Did you probe the subject to find out as much as possible about why s/he said or thought the way s/he did? What did you discover?
7. Were there times when you didn't know what to do next or how to respond to something the person said or did? Times of confusion? If so, what did you do and what happened?

8. Were you surprised or pleased by anything that happened or that you discovered while conducting the activity?
9. Contrast the two sessions. Indicate anything you did differently the second time you conducted the activity. Why? If you only did the activity once, what would you have done differently had you done it a second time?
10. Focusing on teaching, indicate any insights or pointers you encountered that you feel will be useful to you as a teacher. Elaborate.

APPENDIX E

REFLECTIVE PAPER THREE
Discussion Questions for Reflective Teaching Lesson

The following questions should be used to lead the discussion after each lesson has been taught and to assist in writing Reflective Paper 3. Yet, you are not limited to these questions. You are encouraged to share any occurrence, feelings, and/or perceptions regarding your experience planning and teaching the given Reflective Teaching Lesson.

1. How did you go about teaching the Reflective Teaching Lesson? Describe briefly how and why you taught your lesson as you did.
2. In developing your instructional ideas how did you go about:
 - a. building your ideas into a teaching method?
 - b. deciding whether or not the method you had in mind would be likely to work?
 - c. modifying your ideas into a final teaching method?
4. How successful was your methodology in bringing about learning and satisfaction?
5. What was the reaction of learners to the teaching method used?
6. How do you feel about your teaching (learning) experience? What did you like or dislike about it?
7. How did your learners feel about their learning experience? What general advice would your learners give you?
8. What did you learn about teaching?
9. What did you learn about your strengths and weaknesses as a teacher?
10. Do you believe you changed any of your ideas about teaching or attitudes toward teaching? If so, which ones?
11. How do your learners believe you behaved as a teacher? Did you do everything they wanted you to do at all times? What did they want you to do that you did? What did they want you to do that you did not do?

(Cruickshank, p. 8-10, part one)

12. What was meaningful to you in the lesson?
13. What was difficult for you?
14. When did the information come together in your mind?
15. What could I have done to make the lesson better or more meaningful for you?

APPENDIX F

PROJECT A

Behavioral Learning

Listed below are several learning principles drawn mainly from the research of B.F. Skinner. Observe the teacher-student interactions in your internship setting and/or college class (or both for comparison). Write a brief description of the examples and comment about the general usefulness of these behavioral principles for the level at which you are most interested in teaching.

- 1) POSITIVE REINFORCEMENT. The teacher bestows materials (gold stars, tokens, homework passes, free time) or verbal-symbolic (praise) reward for correct or positive behavior.
- 2) NEGATIVE REINFORCEMENT. The teacher rewards behavior by releasing or freeing the student from an unpleasant situation.
- 3) EXTINCTION. The teacher attempts to weaken a behavior by not reinforcing it.
- 4) PUNISHMENT. The teacher attempts to weaken a behavior by presenting some unpleasant consequences.
- 5) PARTIAL REINFORCEMENT. The teacher attempts to maintain or sustain a learned behavior by rewarding sporadically.
- 6) MODELING. The teacher either behaviorally or verbally models the correct or incorrect learning desired. The teacher can also "catch" a student modeling the correct behavior and point that out to the class.

If you found a number of examples of these behavioral applications, how effective were they? If you did not find many examples, speculate why. Either way, consider and comment on the appropriateness of these applications for what you want to teach.

Identify either in the college or public school setting other examples of educational applications of behaviorism: mastery learning; computer aided instruction, specific examples of generalization, discrimination, distributed practice, immediate feedback, vicarious learning, over learning.

APPENDIX G

PROJECT B

1. Review the handout on characteristics frequently associated with each type
2. Based on what you now know about temperament, predict the temperament of a close friend, family member, etc.
3. Have the person take the Keirsey Temperament Sorter
4. Discuss the results of the sorter with the person. Use the handout and information discussed in class to point out general characteristics of that type to the person
5. Question the taker to find out his/her perceptions of the sorter. Does he/she agree or disagree with the characteristics listed for his/her type? Why or why not? What does he/she agree or disagree with? Etc.
6. Write a paper that shares information regarding:
 - a. who you used as a participant for this activity
 - b. why you choose that person
 - c. your prediction of the participant's temperament type
 - d. why you predicted that type
 - e. what type the person actually tested
 - f. his/her perceptions regarding the results
 - g. Etc., etc., etc
7. If this person was in your class as a student, what things would you need to include in your teaching practices?
8. Finally, what have you come to understand about temperament types, learning, and teaching based on this activity and the class discussion?

APPENDIX H

Codes for Journals and Reflective Papers

The codes were developed by the researcher based upon relevant literature on characteristics of reflective teachers and patterns found in student papers.

- D = Dilemmas, struggles, frustrations, fears, problems: These entries represent problems that arise as a result of lack of confidence, fears, frustrations, and/or struggles that take place daily. These areas of focus may be the marks of growth points.
- R = Reflections: This letter refers to comments made that indicate the student has come to a new awareness or realization, and has learned a meaningful lesson. These references usually occur as a result of stepping away from situations and/or experiences, looking back at them, and examining them in an effort to better understand his/her actions and experiences.
- C = Change: These entries extend from reflections usually, but not always. This is where after the student has examined the past situation, he/she makes decisions about which things would be done differently if the opportunity to repeat any incidence, whether it is teaching a lesson or handling a situation, were to arise again. This letter also refers to changes hoped for or observations made that the student would like to change in the future.
- G = Goal(s): This letter refers to goals that the student has set for herself as a result of some experience encountered or activity conducted. Also, things that he or she knows need to do but doesn't.
- P = Philosophy: This letter refers to strong personal statements made that reflect a belief, theory, or philosophy of teaching and learning or education.
- Q = Questions, concerns, curiosities:
- J = Joy, anticipation, enthusiasm, surprises: Positive feelings as a result of experience. Love for teaching profession. Happy experiences. New awareness that cause students to be stunned or amazed.

APPENDIX I

PSS 430: PSYCHOLOGICAL FOUNDATIONS OF EDUCATION
Fall Term, 1990

Text: Educational Psychology: A realistic approach.
Authors - Good and Brophy
Meetings: Monday and Wednesday: 1:00-2:15
Instructor: Loraine M. Stewart
Office hours: Monday and Wednesday 2:30-3:30 (335D)
Phone: 334-5100 (office) or 767-4719 (home)

Course Overview: Effective teaching requires a fundamental understanding of how students learn and develop, and the ability to use this information to coordinate knowledge and skills in the classroom context. Successful teaching stems from the integration of theory and concepts into teaching strategies and practices that are responsive to the learning needs of individual students. Educational psychology provides an important framework for understanding students' development and personality, the psychology of teaching methods, classroom management, classroom motivation, and evaluation.

Class Meetings: An important aspect of class work is the exchange of thoughts around specific questions and activities. As a result, class attendance and participation is imperative.

Journals: One of the most important elements in this course is the keeping of a journal on your thoughts and feelings about it. Write your reactions to class discussions, readings, internship experiences, projects, reflective papers, and lessons taught. Occasionally, I will assign a specific topic for a journal reflection. This journal should be kept separate from other class related notes. Yet, it should be a reflection of any aspects of class that seem significant to you and a record of your thoughts and feelings as you have them.

Your journal will prove to be instrumental in writing the final paper; therefore, it is important to keep it properly. Journals will be collected four times during the course of the semester (See course outline). Ten points shall be given for each journal submission that exhibits regular dated entries. You will receive a separate statement about the final paper later.

Assignments: Two copies of each written assignment are to be handed in. One copy will be returned to you while the other will be placed in a semester file for the class.

Evaluation: The final grade will be determined according to your performance on activities listed below. Your performance will be evaluated on a point system. It is as follows:

| <u>Scale</u> | <u>Points</u> | <u>Grading</u> |
|----------------------|--------------------|----------------|
| Attendance | 30 | 550-600 = A |
| Observation Projects | 50 | 500-549 = B |
| Reflective Paper | 80 | 450-499 = C |
| Journals | 40 | 400-449 = D |
| Quizzes | 300 | |
| Final Paper | <u>100</u> | |
| | 600 total possible | |

Attendance: You will automatically receive 30 points if you are present at each class meeting. For each class you miss, 1 point will be subtracted.

Observation Projects: You will be assigned two observation projects. These will be brief. You will receive a check plus, check, check minus, or a minus. A check plus receives 25 points, a check receives 20, a check minus receives 15, and a minus receives 10 points. If your paper is late without a valid excuse, 1 point is subtracted from its grade each day that it is late.

Reflective Papers: You will be assigned 4 reflective papers. They too will be graded on the point system. You will receive a check plus, check, check minus, or a minus. A check plus receives 20 points, a check receives 16, a check minus receives 12, and a minus receives 8 point. If your paper is late without a valid excuse, 1 point is subtracted from its grade each day that it is late.

Quizzes: Three quizzes shall be given. Each will be graded on a 100 point scale and will consist of both multiple choice and short answer items. These items will encourage you to apply, analyze, and synthesis curriculum content covered.

Final Paper: The final paper will essentially require a comprehensive application and synthesis of information that has been covered throughout the semester.

COURSE OUTLINE

- Aug. 27 Course orientation (Chapter 1 - Classrooms, Teachers, Instruction, and Educational Psychology) and get acquainted
- Assign Autobiographical Statement "Why I Teach"
- Aug. 29 Understanding individual differences and ways of communicating
- Complete Posner's Teacher Belief's Inventory
- Conduct Communication Activity with class
- Assign Reflective Paper 1 (Communication Activity)
Due - Autobiographical Statement "Why I Teach"
- Sept. 3 **Labor Day Holiday**
- Sept. 5 Discuss Chapter 2 (Physical Development) and Chapter 3 (Basics of Cognitive Development)
Due - Reflective Paper 1
- Assign Reflective Paper 2 (Teacher-directed questions)
- Sept. 10 Discuss Chapter 4 (Cognitive Development and Education) and Chapter 5 (Social and Personal Development)
Due - Reflective Paper 2
- Sept. 12 Discuss Chapter 6 (Psychology of Learning) and Chapter 7 (The Behavioral Approach of Learning)
- Assign Project A (Observations of Behavior Modification)
- Sept. 17 Discuss Chapter 8 (The Cognitive Structural View of Learning) and Chapter 9 (The Information-Processing View of Learning)
- Collect journals
- Sept. 19 **Quiz 1**
- Distribute Temperament and Learning Style Inventories
- Sept. 24 Lecture on learning styles and temperament
- Sept. 26 Open discussion on learning styles and temperament as they relate to teaching and learning
- Assign Project B (Temperament of a friend)
- Oct. 1 Peer Interviews (audio-tape)
- Oct. 3 Discuss Chapters 10 (Skills for Learning) and Chapter 11 (Instructional Design)
Due - Project B
- Oct. 8 Discuss Chapters 12 (Approaches to Classroom Instruction) and Chapter 13 (Basic Instructional Skills)
- Oct. 10 Discuss Chapter 14 (Basic Concepts of Motivation) and Chapter 15 (Cognitive Viewpoints)
- Collect journals
- Oct. 12 - 17 **FALL BREAK**

- Oct. 17 Discuss Chapters 16 (Guidelines for Motivating Students) and Chapter 17 (Communicating Appropriate Expectations to Low Achievers)
- Oct. 22 **Quiz 2**
- Oct. 24 Introduce Cruickshank's Reflective Teaching Lessons and their purpose
- Assign Reflective Teaching Lessons to be taught and Reflective Paper 3 (based on RTL)
- Oct. 29 Students teach Reflective Teaching Lessons (video-tape)
- Oct. 31 Students teach Reflective Teaching Lessons (video-tape)
- Nov. 5 Discuss Reflective Teaching Lessons and implications for teaching and learning
- Nov. 7 Discuss Chapter 18 (The Humanistic Perspective) and Chapter 19 (Overview of Classroom Management)
Due - Reflective Paper 3
- Nov. 12 Discuss Chapter 20 (Establishing and Maintaining a Good Learning Environment) and Chapter 21 (Principles and Techniques of Behavior Modification)
Due - Project A
- Assign Reflective Paper 4 (based on internship lesson)
- Nov. 14 Discuss Chapter 22 (Humanistic Approaches to Counseling Disturbed Students) and Chapter 23 (Socioeconomic Status, IQ, and Gender Differences among Students)
- Nov. 19 Discuss Chapter 24 (Cognitive Style and Creativity) and Chapter 25 (Educating Students with Special Needs)
- Collect journals
- Nov. 21 **Quiz 3**
- Nov. 26 **Thanksgiving Holiday**
- Nov. 28 Discuss Chapter 26 (Principles of Educational Measurement) and Chapter 27 (Statistical Concepts)
- Dec. 3 Discuss Chapter 28 (Test Construction) and Chapter 29 (Assigning Grades)
- Dec. 5 Peer Interviews (audio-tape)
Due - Reflective Paper 4
- Dec. 10 Last class / Wrap-Up
- Assign take home final paper
- Collect journals