ABSTRACT

JOHNSON, LISA E. Congruence Between Professional Judgment and Professional Action as Disposition: A Case Study of Mentors and Beginning Teachers. (Under the direction of Dr. Alan J. Reiman.)

The purpose of this research project was to explore congruency between teacher professional judgment and professional action as constructs of disposition. Three cases of mentor/beginning teacher dyads were used as informants for the study and were chosen based upon their involvement in a DPPE (Deliberate Psychological and Professional Education) program. Each informant's disposition was measured in terms of his or her professional judgment and professional action. Professional judgment was conceptualized in terms of three domains a) teacher's moral/ethical judgment as representative of democratic values, b) teacher's ego judgment as representative of self-understanding, and c) teacher's conceptual/reflection judgment as representative of evidenced-based decision-making and facilitator of instruction. Professional action was described as observable trends in behaviors that correspond to the same three judgment domains, moral/ethical, ego, and conceptual reasoning.

The parameters for gathering data were set around a cycle of assistance in which each dyad of mentor/beginning teacher was engaged. The purpose of the cycle was to allow the beginning teacher to identify a specific teaching behavior (i.e., lesson planning, higher order questioning, etc.) that he or she would like to improve. The teacher worked with the mentor through conference sessions, demonstrations, and observations to master the chosen behavior. During these cycles, professional judgment and professional action were investigated using both standardized assessments and descriptive measures. Professional judgment was assessed using the Defining Issues Test-2 (moral/ethical judgment), the

Sentence Completion Test (ego judgment) and the Paragraph Completion Method (conceptual judgment). Professional action was measured using an adapted form of the Flanders Interaction Analysis System known as the GIAS (Guided Inquiry Analysis System). Both instruments assess verbal interactions between an instructor (teacher or mentor) and a learner (students or beginning teacher). These measures were supplemented by the application of a coding matrix that described specific judgments and actions based upon the theoretical framework of moral/ethical development, ego development, and conceptual development. Data for the matrices were gathered through observations of instruction and conferencing, interviews with the informants, written lesson plans, and other artifacts such as reflective journaling and self-assessments.

A method of pattern matching was used to analyze the informants' judgments and actions. Convergence between the two methods of data collection, standardized measures and coding matrices, was first investigated followed by an examination of the congruence between professional judgment and professional action. Strong convergence was found between the standardized measures and the coding matrices. Congruence between teacher judgment and action was also found for all participants. For example, more complex judgment levels for the three domains were associated with more evidence-based decision-making, more learner-centered inquiry, and more facilitative forms of mentoring or instruction (i.e., accepting the ideas and feelings of the learner). Based on these findings, recommendations are made for teacher education and professional development programs interested in fostering and assessing disposition.

CONGRUENCE BETWEEN PROFESSIONAL JUDGMENT AND PROFESSIONAL ACTION AS DISPOSITION: A CASE STUDY OF MENTORS AND BEGINNING TEACHERS

by

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    Chair of Advisory Committee

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DEDICATION

To my Dad, Robert Upchurch, from whom my courage to succeed and strength to persevere can undeniably be attributed. I am the person I am today because of your support and confidence in me.

To my Mom, Elizabeth Upchurch, whose faith in both me and the Lord has brought me to this place of peace. You are my blessing, my rock, my friend.

Finally, to my husband Cory and son Samuel, the two loves of my life by which none other can be measured. Nights spent working with the sounds of *The Little Engine That Could* playing in the background will never be forgotten. Finally our train is ready to leave the station – All Aboard!

"I think I can, I think I can, I think I can…I knew I could"

BIOGRAPHY

Lisa Johnson was born in Homestead, Florida in 1972. As the second daughter of Retired Colonel Robert and Elizabeth Upchurch, Lisa grew up in a military family traveling throughout the United States and Europe. When her father retired and settled in Raleigh, North Carolina, Lisa started her journey into higher education at the University of North Carolina at Chapel Hill. After graduating with a Bachelor of Arts degree in Elementary Education in 1995, Lisa began her career as a teacher. Soon after, she met and married Cory Johnson and moved to Statesville, North Carolina. Lisa decided to pursue and was awarded a Masters degree in Elementary Education from the University of North Carolina at Charlotte. In order to continue her education, Cory, Lisa, and their son Samuel moved back to Raleigh. While continuing to teach in the public schools, Lisa earned her National Board Certification in 2001 and started working on her doctoral degree. She completed her studies in 2004 and was awarded the Doctorate from the Department of Curriculum and Instruction at North Carolina State University.

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CHAPTER 1 - INTRODUCTION

Introduction to the Study

The current rigorous standards for the nation's students have placed renewed

attention on the development of high quality teachers. Various organizations agree that

students must have teachers with the knowledge, skills, and dispositions to support the

premise that all students are capable of learning (NCATE, 2002; Serafini, 2002; NBPTS,

1989). "Knowledge" and "skills" are well defined and catalogued by accrediting

organizations (NCATE, 2002; NBPTS, 1989). Schools of education have concentrated on

the knowledge and skills that are requisite for effective teachers however, little has been done

to promote dispositional development (Raths, 2001). In fact, scant research even exists in

regards to defining and clarifying the elusive concept of teacher dispositions.

How exactly do teacher dispositions connect to teacher quality, and why is teacher

quality even an issue? Teacher quality has been directly linked to student achievement in

scholarly writings and empirical studies such as those done by Bill Sanders and the TVAAS

(Tennessee Value-Added Assessment System). In the early 1990s the TVAAS was designed

to assess school systems, schools, and teacher effectiveness in terms of student achievement

(Sanders & Horn, 1998). Results from over five million records and thirty separate analyses

indicated one of the most important factors in student academic growth is teacher

effectiveness. "The teacher effect is highly significant in every analysis and has a larger

effect size than any other factor in twenty of the thirty analyses" (Wright, Horn, & Sanders,

1997, p. 61).   Further investigation showed students in classrooms of ineffective teachers

were unable to compensate for their lack of growth even when placed with a highly effective

teacher. "The immediate and clear implications of this finding is that seemingly more can be

done to improve education by improving the effectiveness of teachers than by any other single factor" (p. 63). The use of such data has surpassed evaluation and led teachers, schools, and school systems to reflect upon their stance in regards to instructional strategies and work to "meet the needs of students from differing academic attributes and abilities" (Sanders & Horn, 1998, p. 250).

Further, a National Commission on Teaching and American's Future Report surmised that neither school reform nor student achievement come from new curriculum or community programs (1996). It comes from teacher quality. Teachers make the difference in what children do. "Student learning in this country will improve only when we focus on our efforts on improving teaching" (p. 5). Teacher quality and student achievement are inextricably connected.

Institutions of education have revised their standards to reflect the call to improve teacher quality. These standards for teacher certification and teacher education program accreditation show evidence of renewed awareness of the importance of teacher development. The National Council for the Accreditation of Teacher Education (NCATE) has written in its standards for 2002 that schools accredited by the association will provide students with an education consisting of "the knowledge, skills, and dispositions necessary to help all students learn" (p.1). These standards are echoed by other prominent educational organizations such as the Interstate New Teacher Assessment and Support Consortium (INTASC) and the National Board for Professional Teaching Standards (NBPTS) both of which are dedicated to developing standards for what effective teachers need to know and should be able to do to help students learn (Mitchell, Robinson, Plake, & Knowles, eds.,

2001).   INTASC standards state, "dispositions are an integral part of newly developed teacher standards and principles" (Powers, 1999, p. 1).

Addressing knowledge and skill requirements of the content areas, in addition to embracing the role of teacher disposition in the academic and developmental achievement of all students will be imperative. Mark Wasicsko (2002) of The National Network for the Study of Educator Dispositions agreed.

> Most teacher educators will admit that they recognized the 'dispositional mismatch' of some students very early but did not have the tools to adequately counsel them…In the ideal setting, people considering a career in education should be provided with an opportunity to make self-assessments about their 'dispositional fit' followed by mentoring and guided reflections with education advisors (p. 1).

James Raths (2001) stated in an essay, "teacher education programs are largely ineffective in improving the current practice of teaching" (p. 1). He describes problems in teacher education as one of being proficient and effective at instructing the skills involved in teaching, yet lacking focus in promoting beliefs which are the "dispositions to act" (p. 5). Linda Darling-Hammond (1999) of the Center for Policy and Teaching studied how teacher quality related to student achievement. While many variables were considered such as degreed in field, hiring standards, and accreditation of one's educational institution, Darling-Hammond concluded that interest in improving student achievement should start by examining the qualifications, preparations, and dispositions of potential teachers. In addition, teacher education programs that encourage dispositions will produce teachers more likely to adapt to the needs of the students. Studying new reform programs in teacher

education is necessary to confirm Hammond's belief that teacher quality is a better indicator than factors such as salary, class size, or population.

In a study conducted by Renzaglia, Hutchins, and Lee (1997) a review of issues related to the education of preservice special educators was conducted with the following conclusion:

> The number of experiences, sequence of activities, types of placements, and supervision strategies in school experiences and student teaching should be explored. What specific strategies effect preservice teachers' beliefs, attitudes, and dispositions and override the preconceived ideas candidates bring into the teacher education program? Supervision models, strategies within models, and roles of university supervisors, cooperating teachers, and course instructors need to be investigated, and comparative studies are needed to determine the relative effectiveness of different approaches (p. 373).

In summary, various accrediting organizations in teacher education and development endorse a new focus on dispositions as a fundamental element of teacher quality. However, current definitions of disposition lack clarity, are atheoretical, and provide few clues for teacher education programs hoping to be more intentional in the fostering of positive changes in disposition. Each of these shortcomings will be discussed in detail outlining the critical need for research and reform in relation to understanding teacher dispositions.

Statement of Purpose

Three challenges currently face teacher education and teacher professional development: the establishment of a clear definition for dispositions that is supported by a theoretical framework, the need for empirical evidence supporting such a definition in

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various educational contexts, and a description of programs aimed at promoting dispositions. This study explored teacher professional judgment and teacher professional action as core components of teacher disposition. Case study methodology was used to gather rich, thick description of three dispositional domains: moral/ethical judgment and action, ego judgment and action, and conceptual judgment and action. The evidence gathered from three case studies of beginning teacher/mentor teacher dyads was then used to examine two patterns: (1) convergence between judgments that were predicted and those that were observed and (2) congruence between judgments and actions. Implications will be made for teacher education programs, programs for teacher induction, and continued professional development.

Research Questions

This study explored the following questions:

1) How does the professional judgment of mentor teachers correspond to their professional action as they assist in beginning teacher development?

   a) How does the level of moral/ethical judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

   b) How does the level of conceptual judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

   c) How does the level of ego judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

   d) How do these professional judgments and actions influence interactions with the beginning teacher?

2) How does the professional judgment of beginning teachers correspond to their professional action as they address the needs of diverse learners?

a) How does the level of moral/ethical judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

b) How does the level of conceptual judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

c) How does the level of ego judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

d) How do these professional judgments and action influence the interactions with diverse learners?

These questions served as a guide for the research in collecting and analyzing empirical evidence regarding teacher dispositions.

Significance of the Study

Dispositions are a missing link in teacher education. Traditional teacher education programs have concentrated on providing students the knowledge (e.g., curriculum, child development, subject matter) and the skills (e.g., pedagogy, lesson design) necessary to enter the classroom. However, behaviors exhibited by teachers that "summarize the trend of the teacher's actions," (Katz and Rath, 1985, p.301) also known as dispositions, are not seen as a priority in teacher education programs (Wasicsko, 2002). Darling-Hammond (1999) published a study outlining the effects of a multitude of variables on student achievement. She found that while smaller class size and level of advanced degrees held by a teacher do affect student learning, it is the teacher qualification and preparation, including dispositional state, that need to be examined further as they have great potential in altering student achievement. Teachers emerging from education programs are not demonstrating behaviors set forth by published standards nor do they have the ability and attitudes to teach all students

(Yost, 1997; Goodlad, 1994; Howey & Zimpher, 1989; Sirotnik, 1990). As the NCATE

(2002) standards suggest, including dispositions as part of teacher education programs

promotes beliefs and attitudes that can positively influence the learning and behavior of

students. John Dewey (1964) once stated, "To ignore native aptitude, and to depend wholly,

or even chiefly, upon the knowledge and use of 'methods', is an error fatal to the best

interests of education" (p. 198). He saw one of the primary challenges for teachers being the

development of dispositions toward reflection, inquiry, ethical judgments, and orientation

towards the multifaceted processes of students (Dewey, 1904). Dewey's thoughts were

later supported by the ASCD (Association for Supervision and Curriculum Development)

(1962) who published *Perceiving, Behaving, and Becoming*. Outlining several pieces of

work by scholars in the field of human interactions, the text maintains assumptions analogous

to what might be viewed today as effective dispositions. Contributors such as Kelley,

Combs, Rogers, and Maslow, although holding somewhat varied ideas on how to assign

meaning to values and beliefs, shared the notion that "these beliefs and values are not just

intellectual or abstract ideas but, rather, deep and consistent convictions which affect actions"

(p. 199). Personal connections made to learning lead to increased knowledge of behavior.

For the four scholars, implications for education were shown through teachers who viewed

mistakes as learning opportunities, held strong beliefs about education, and possessed the

courage to stand on their convictions. These ideas, as well as those given by more recent

scholars, underscore the significance of understanding and promoting the dispositional

development of teachers. Three challenges however, are holding teacher education back

from the inclusion of dispositions in their curriculum: the problem of definition grounded in

a theoretical framework; the absence of evidence connecting professional judgments and

professional actions; and the need for specific descriptions of programs aimed at developing teacher dispositions associated with ethical and learner-centered practice.

Challenge I: The Problem of Definition

If institutions of accreditation, research studies, and government legislation support the idea of including dispositions as part of teacher education programs building on the idea that all students can learn, where's the problem? According to Testing Teacher Candidates: The Role of Licensure Tests in Improving Teacher Quality (2001) finding a clear, concise definition for disposition as it connects to teacher judgment and behavior is anything but simple.

Evidence can be found throughout the historical literature of concepts similar to disposition. In 1968, Hamachek postulated that effective teaching dealt largely with a teacher's classroom behavior. His theory is based significantly on a study by Flanders (1960) in which four conditions of teacher behavior affected students' view of their teachers in the seventh and eighth grade: ability to assume a variety of roles, control of his or her behavioral reactions, understanding of principles of education (able to diagnose and prescribe), and attaining an adequate combination of critical behavior and sensitivity. Other researchers have concentrated on constructs such as perceptions, beliefs, attitudes, etc. when describing dispositions (Taylor & Wasicsko, 2000). Work by Katz and Raths (1985) however, departed from such a broad spectrum of terms by defining dispositions as "an attributed characteristic of a teacher, one that summarizes the trend of a teacher's actions in particular contexts" (p. 301). The authors offered detailed description on how dispositions differ from concepts such as habits, traits, skills, and attitudes (p.301). Finally, a definition used by NCATE in its published standards for 2002 reads:

[Dispositions are] the values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and communities, and affect student learning, motivation, and development as well as the educator's own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. For example, they might include a belief that all students can learn, a vision of high and challenging standards, or a commitment to a safe and supportive learning environment (p. 53).

With such an array of definitional components, defining and thoroughly understanding what is meant by dispositions is challenging. It is quite easy to understand how professors at a major university, when asked to define dispositions, responded with words such as "fuzzy", "subjective", and "confusing" (Johnson, 2003). Implementing dispositions as part of a teacher education program must be grounded in a concise, congruent definition with clear guidelines on what is meant by displaying "effective teacher dispositions." For this answer one can turn to the work of Lee Shulman.

Shulman studied the attributes of education as a profession. He examined characteristics that define professions linking the commonalities between education and other professional fields. Shulman (1998) summarized six such characteristics:

- The obligation of service to others, as in a calling;

- Understanding of a scholarly or theoretical kind;

- Domain of skilled performance or practice;

- Exercise of judgment under conditions of unavoidable uncertainty;

- The need for learning from experience as theory and practice interact; and a

- Professional community to monitor quality and aggregate knowledge (p. 516).

For Shulman, professional judgment provided the necessary bridge between knowledge and practice. It allowed for "both the technical and moral elements, negotiating between the general and the specific, as well as between the ideal and the feasible" (p. 519). Such judgment is composed of the social, reflective, and moral domains (Mentkowski & Associates, 2000; Oser, Dick, & Patry, 1992). The act of teaching is, by nature, composed of judgments made in reference to aspects such as resolution of classroom dilemmas, conducting student assessment, and allocating resources (including one's own time and attention).

In addition to judgments, Shulman described a call for action. Based in a moral foundation of a call to serve others, professional actions emerged from the employment of "technical skills and theoretical knowledge in a matrix of moral understanding…[which] involve social purposes and responsibilities that are both technically and morally grounded" (p. 516). Embedded in the notion of professional action is the principle of learning from experiences. Teachers must be educated to develop a disposition toward inquiry, consistently reflecting and analyzing their own actions.

In light of Shulman's work and that of other scholars previously reviewed, the following definition proposed by Reiman and Johnson (2004) will be utilized in this study: Professional disposition is defined as an attributed characteristic of a teacher that represents a trend of a teacher's judgments and actions in ill-structured contexts (situations in which several solutions exist). Further, it is assumed that these dispositions (i.e., trends in teacher judgments and actions) develop over time in deliberate professional education program.

Challenge II: Lack of Theory

A second challenge exists in the establishment of a theoretical foundation for dispositional development in a profession that has been historically atheoretical. The definition previously proposed is composed of two major theoretical principles: 1) Dispositions as teacher judgments and actions in ill-structured contexts, and 2) Development of dispositions through deliberate professional education programs (also known as DPPEs). Each of these principles is discussed in terms of their underlying theoretical framework.

Cognitive-Developmental Theory

While several psychological disciplines such as theories of perception and behaviorism have worked to define and develop descriptions of disposition based on their own theoretical underpinnings, it is the idea of cognition, making judgments and taking action in ill-structured situations, by which disposition should be defined. Various studies on teacher effectiveness throughout history have listed characteristics such as democratic, flexible, able to take in multiple perspectives and vary responses, reflective, and effective at communicating as key to teacher success (Witty, 1947; Hunt, 1976; Percy, 1990; Arlin, 1993; Reiman & Thies-Sprinthall, 1998). Fostering such characteristics in adults often requires a change in patterns of thinking known as cognitive development. Foundations in cognitive development began with Jean Piaget who primarily studied cognitive growth in children. However, Tennant (as cited in Merriam & Caffarella, 1999) postulated three contributions from Piaget which relate to cognitive growth studies in adults:

1. The emphasis on qualitative rather than quantitative developmental changes in cognition (and his related "structrualist" approach to cognitive development).

2. The importance attached to the active role of the person in constructing his or her knowledge (with the implication that learning through activity is more meaningful [than passive learning]).

3. A conception of mature adult thought (that is, formal operations) (p. 140).

Similarly, longitudinal research was initiated by King and Kitchener (1994) in reference to epistemic cognition. Also a stage model, King and Kitchener's study looked at young adults and their ability to use reflective judgment in times of ill-structured problems. The judgment used in these cases was constructed and "understood within the context in which it was generated… and should remain open to evaluation and reevaluation" (p. 144). The work in reflective judgment can be related to that of decision-making. Understanding how and why teachers make certain judgments as well as how to change the process by which judgments are made is a critical component of teacher effectiveness. Clark and Peterson (1981), used the theory of decision making (reflective judgment) as a cognitive process, to discover how and why teachers made judgments to change certain aspects of lessons after noticing changes in students' behaviors or actions. Finally, Reiman and Johnson (2004) in a meta-analysis described 12 studies designed to promote change in the dispositions of teachers. All of the studies maintained the theory of cognitive-developmental growth as their foundation adhering to the following assumptions:

- All persons experience change through cognitive structures;

- Cognitive structures are organized in a hierarchical sequence of stages or plateaus from the less complex to the more complex;

- Each shift in stage represents a major transformation in how a person makes meaning from his or her experience;

- Development is not automatic; and

- Behaviors can be determined and predicted by a person's particular stage of cognitive reasoning (Reiman & Thies-Sprinthall, 1998).

Three dimensions of adult development were examined in this study as domains of professional development: The moral/ethical dimension as ways in which individuals think about issues of fairness and social justice; the conceptual/reflective dimension as a person's preferred style of thinking and reasoning about abstract and ill-structured concepts; and the ego dimension as a person's level of self-understanding including an awareness of emotions. Reiman and Thies-Sprinthall (1998) describe the domains as connected but independent; interacting as a coherent whole represented by Figure 1.1.
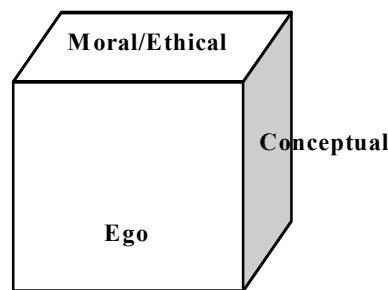
Figure 1.1: **Three Dimensions of Adult Development** (Adapted from Reiman and Thies-Sprinthall, 1998, p. 43).

The model portrayed in Figure 1.1 illustrates the three domains having a prominent impact on the teaching profession. First, the teacher is seen as an epistemologist and instructional manager able to consider various perspectives when solving problems (conceptual domain). Second, the teacher can act as a representative of democratic values and make judgments based upon principles of social justice and diversity (moral/ethical domain). Finally, the teacher realizes self-actualization while being sensitive to the needs of others (ego domain). Thus, these domains encompass the significant portion of judgments

and actions teachers use when encountering situations in educational contexts (Reiman, 1999b; Watson & Reiman, 1999).

DPPE – Deliberate Psychological and Professional Education

The second component of the definition of disposition states that dispositions develop over time in deliberate professional education programs. Such programs must support the theory of adult development with a focus on the cognitive domains (moral/ethical, conceptual, and ego) necessary for dealing with ill-structured problems. The framework for the DPPE began with the research of George Herbert Mead in social role-taking (1934). By taking on new roles, individuals are forced to reflect on their actions in relation to themselves and to others. This reflection, over time, fostered the development of consciousness. Selman (1980) notes that it is this consciousness that increases the growth of interpersonal understanding. With the addition of shared experience and increasing complexity of the social perspective taking, psychosocial competence took on a developmental nature and spreads to teacher education (Selman, Watts, & Schulz, 1997).

Seven principles for adult growth and development have emerged from the research presented by Mead and Selman in collaboration with other investigators (Joyce & Showers, 1995; Oja & Smulyan, 1989; Sprinthall, Reiman, & Thies-Sprinthall, 1996; Reiman, 1999a; Reiman & Johnson, 2004). The conditions outlined below provide a theoretical framework for adult cognitive development, more specifically the development of professional judgment and actions across the moral/ethical, conceptual, and ego domains:

1. *Contextualized Learning and Development*: Recognition must be made of prior knowledge and learner experiences. It must also be acknowledged that all learners are diverse in their background and needs.

2. *New Role-Taking (not role-playing)*: The learner needs to be actively engaged in a complex new role or helping relationship. Inquiry and reflection that emerges from interaction with real and immediate problems lend themselves to the most significant gains in consciousness and interpersonal understanding.

3. *Guided Inquiry*: As a process of both analysis and meta-reflection, guided inquiry should be monitored by a more capable other and can include performance assessment, dialogue journaling, and ongoing discussion.

4. *Balance*: Cycles of action and reflection must remain in balance. Too little or too much time between action and inquiry can result in frustration and a lack of growth.

5. *Support and Challenge*: The zone of proximal development as termed by Vygotsky allows the more capable other to create an environment with a balance between supporting the learner and providing optimal challenges. This condition is often viewed as the most difficult of the conditions considering the engagement in a new role alone can be challenging.

6. *Reflective Coaching*: An instructional model is necessary for describing how new abilities are fostered in an adult learner. Coaching steps include assessment of prior knowledge and performance, overview of related theory and evidence, demonstration, opportunity for guided practice and feedback, and eventual adaptation and generalization of the performance.

7. *Continuity*: Cognitive growth and development requires continuous action and reflection. This usually requires no less than four to six months.

The framework can be put into action through cycles of assistance. First envisioned by Morris Cogan (1973), the cycles were considered a "practice designed to improve the

teacher's classroom performance" and had a goal to "improve the students' learning by improving the teacher's classroom behavior" (p. 9). Today, *developmental* clinical assistance, as termed by Reiman & Thies-Sprinthall (1998), involves recognizing the unique needs of the adult learner adding four aspects to Cogan's initial ideas: the teacher's cognitive-developmental growth is a goal of the coach or mentor; a support program must be implemented to assure sequence and continuity; adaptation and generalization activities are used and analyzed through guided reflection; and the coach provides models of effective instruction and adjusts to the needs of the adult learner. These four additions are crucial to acknowledging the developmental characteristics of the learner in relation to information given. Developmental clinical assistance allows for an individualized program that can build effective teaching dispositions across the moral/ethical, conceptual, and ego domains. It consists of phases through which the coach and the learner progress simultaneously. These phases emerged from Cogan's (1973) belief that data be gathered and approached "not as isolated events or brief sequences, but in terms of analysis of classroom behavior" (p. 7). Reiman and Thies-Sprinthall (1998) propose following a cyclical model of eight steps:

- Phase 1. Establishing the relationship through getting acquainted and defining roles

- Phase 2: Gaining knowledge and developing a coaching plan for improving a teaching behavior

- Phase 3: Conducting a pre-observation conference

- Phase 4: Observing instruction

- Phase 5: Analyzing the teaching/learning processes with respect to providing support and challenge to the beginning or student teacher

- Phase 6: Conducting the post-observation

- Phase 7: Developing new planning efforts and a new coaching plan (thus the cycle begins again)

Implementing a developmental clinical assistance model is imperative for all teachers, but it cannot be argued that one of the most imperative stages must be in student teaching and teachers in their first years of teaching where disequilibrium and emotional unrest is at a significantly high level. Reiman (1999b) calls for teacher education and induction programs that are "based on a conception of teacher growth and development; acknowledge the complexities of classroom, school, and community; are grounded in a substantial and verifiable knowledge base; and are sensitive to ways teachers think, feel, and make meaning from their experiences" (p. 248). The idea of clinical assistance has shown positive effects for educators who have experienced it first hand. It has resulted in higher retention rates of beginning teachers and significant gains in conceptual reasoning (Reiman & Watson, 1999). Yet, there remains a need for research that supports the cognitive-developmental growth of the student teacher and the beginning teacher through a framework of integrated learning which recognizes the needs of the teacher, the benefits of guided reflection, appropriate models of effective instruction, and a coach willing to individualize strategies. This study integrated the established DPPE of developmental clinical assistance with the theory of adult cognitive development and explored the impact on mentor and teacher dispositions.

A lack of theory exists in the professional development programs in which teachers, both preservice and experienced are involved. After proposing a concise definition for dispositions, a theoretical framework was presented in reference to cognitive development and deliberate programming (developmental clinical assistance) aimed at growth in the

structures of moral/ethical, conceptual, and ego judgments and actions. A final challenge

remains – how best to collect evidence on the manifestation of dispositions.

<center>*Challenge III: Lack of Evidence*</center>

By viewing dispositions as a process of cognitive activity in ill-structured situations

fostered by a DPPE such as developmental clinical assistance, options for gathering evidence

can now be presented. As noted previously, cognitive change in adults can be seen as a

matter of qualitative and quantitative measures. A recent review of research by Reiman and

Johnson (2004) connected the intervention of a DPPE with positive changes in dispositions

of preservice and practicing teachers. Measured in effect sizes, the study is an example of

quantitative evidence on significant dispositional growth based on cognitive measures in the

moral/ethical, conceptual, and ego domains. This research review and the related field of

research in teacher judgment have paved the way for more finely grained studies on the

manifestations of dispositions in the educational context as well as connections between such

manifestations (actions) and underlying judgments. As Walker (2002) suggests, behavior

must be viewed in light of the "psychological processes that give rise to it" (p. 354).

Gathering Evidence: A Call for Cases

As dispositions emerge to the forefront of teacher education, one may ask what is

most useful, a set of numerical data showing an increase or decrease in cognitive-

development or a description of individual cases emphasizing the manifestations of and links

between judgment and action in particular contexts? Better still, why must this be a question

of either/or? Imagine a study where cognitive measures are used to establish the

dispositional state of the participants followed by rich, thick description (gathered by both

quantitative and qualitative methods) of how the judgments and actions of the participants

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match or mismatch such a state. Shulman (1998) stated, "cases capture pieces of experience that initially existed solely within the life of a single individual, and they transform that solitary experience into text" (p. 525). Teacher educators, principals, administrators, and others who are seeking to make sense of how dispositions play out in educational contexts need descriptive cases to bridge the separation between theory and practice. Since it is impossible to separate the phenomenon of disposition from other variables in the context of education, case study methodology presents itself as the most viable and effective means by which to collect evidence (Yin, 2003). In the following section, steps are proposed for gathering evidence on teacher dispositions.

The Nature of the Study

The case study research design provides a valid and reliable means to connect teacher judgment and action to the theoretical foundation of adult cognitive development in the context of beginning teacher/mentor teacher relationship where developmental clinical assistance is used (Yin, 2003).

1. *Study Questions*: Previously stated, the study questions are an indication of the strategy being used in the study. Questions beginning with "How" or "Why" signal a case study exploratory and descriptive in nature.

2. *Study Propositions*: In exploratory and descriptive case studies, study propositions "direct attention to something that should be examined within the scope of the study" (Yin, 2003, p. 22). Such propositions not only guide the researcher in where to look for evidence, they make a statement about the nonexistence or lack of importance of other possible situations in which data could be gathered. In this case study, data were gathered based upon the study proposition that professional judgments and

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actions will manifest in situations centered on developmental clinical cycles of assistance (described previously).

3. *Theoretical Propositions*: Establishing theoretical foundations at the beginning of a case study separates its methodology from related strategies such as grounded theory and ethnography. The theory guided the research from the standpoint of the other components of the case study design making it not only helpful in stating questions and determining a unit of analysis, but essential in defining criteria for interpretation of data once it has been collected. Two theoretical propositions were maintained for this study: Dispositions being based in deep cognitive structures, more specifically within moral/ethical judgment and action, conceptual judgment and action, and ego judgment and action, and adult growth and development occur through a DPPE.

4. *Unit of Analysis*: Defining the unit of analysis is the act of defining the case being studied. Dispositions in the domains of moral/ethical judgment, conceptual judgment, and ego judgment were the units of analysis for this study.

5. *Linking Data to Propositions*: A means of linking the data gathered to the stated propositions must be established prior to collection, hence increasing the validity of the findings and conclusion. In this study, data were linked using a method of pattern matching (Campbell, 1975). Such a method allows for a comparison of an empirically based pattern with one that was predicted (see Appendix A). Predicted patterns were based on the theoretical framework.

6. *Criteria for Interpreting the Findings*: Also following Campbell's method of pattern matching, indicators of the dispositional domains (moral/ethical, conceptual, and ego) were used to measure whether or not judgments and actions obtained through

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quantitative measures were congruent with observations, interviews, and artifact analysis.

Limitations to the Study

This study was conducted in three school settings with three beginning teacher/mentor teacher dyads. The use of case study methodology, even with multiple cases and multiple units of analysis, has inherent limitations including that of external validity. Six volunteer participants were used allowing the results only to be generalized to those individuals; this is by no means an attempt to generalize to all beginning teachers and mentor teachers. In actuality, the study seeks to make generalizations to the theoretical propositions stated. In reference to reliability, a replication of the study that resulted in the same findings can only be said to occur should the same identical cases be used.

A second limitation to the study was the role of the investigator in terms of the DPPE. Being an instructor of the course in which the participants were enrolled can be seen as a threat to validity however, the investigator was not responsible for responding to or assessing the work of the participants (this was left to a co-instructor).

Definition of Terms

The following is a list of key terms and their definitions used throughout the study.

- *Assistance/Coaching/Mentoring* refers to a process of collaborative inquiry in which a teacher engages in a complex new role and is assisted by a more capable other (the coach or mentor) through planning, practice, and demonstration (Reiman & Peace, 2002). The three terms are used interchangeably throughout the study, but are distinct from terms such as "supervision" which often signifies an inclusion of summative evaluation.

- *Beginning Teacher,* also referred to as the "novice", is one who is in the induction phase of teaching (first, second, and third years) (Simmons, Emory, Carter, Coker, Finnegan, Crockett *et al.*, 1999). Most states have established teacher induction programs that include the assigning of a mentor to each beginning teacher.

- *Conceptual Judgment* describes the cognitive ability to understand abstract concepts including ways in which a person solves problems related to interactions with others. Harvey, Hunt, and Schroder (1961) hypothesized that as teachers move from concrete to more abstract ways of dealing with human interactions, their goals and behavior also change. For example, Hunt (1976) described a conceptual system of "reading and flexing" in which students present a behavior to which the teacher must read, interpret, and respond. As teacher abstractness increases, the ability to "read and flex" becomes more advanced through perspective taking and adaptability.

- *Cycle of Assistance* is a process of a mentor or coach guiding a teacher colleague through pinpointing, practicing, and generalizing a specific teaching behavior focus. Each cycle consists of interdependent phases such as the development of a coaching plan, a pre-conference, an observation, and a post-conference (Reiman & Thies-Sprinthall, 1998).

- *Defining Issues Test (DIT or DIT-2)* is a method of assessing moral/ethical judgment or "the development of concepts of social justice" (Rest & Narvaez, 1998, p. 26). It is a paper-and-pencil measure that presents subjects with 12 issues to rank according to their importance in reference to a hypothetical dilemma. Results of the measure are presented in terms of the distribution of reasoning across three schemas: Personal Interest, Maintaining Norms, and Postconventional Schema. A percentage ranging

from 0 – 95% is also reported measuring the amount of justification given that represents Postconventional (previously "Principled") reasoning.

- *Deliberate Psychological and Professional Education (DPPE)* refers to a program seeking to make a developmental change (Lipsey & Wilson, 1993). More specifically, this study has operationalized the program based upon the concept of social role-taking and interpersonal growth (Mosher & Sprinthall, 1970; Mead, 1934; Selman, 1980). Appendix B, Conditions for Adult Development, illustrates the fundamental conditions of the DPPE and include contextualized learning and development, new role-taking, guided inquiry, balance, support and challenge, reflective coaching, and continuity.

- *Diverse Learners* entail the myriad of students in today's schools. According to NCATE (2002) differences exist "among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographical areas" (p. 53). These differences along with those more instructionally based such as preferred style of learning (i.e., visual, auditory, kinesthetic, etc.) are some of the "most critical factors [in educating students] emerging as we become a global society" (Holm & Horn, 2003, p. 377).

- *Disposition* is an attributed characteristic of a teacher that represents a trend of a teacher's judgments and actions in ill-structured contexts. Further, it is assumed that these dispositions, trends in teacher judgments and actions, develop over time in deliberate professional education programs.

- *Effect Size* describes the magnitude of gain resulting from a developmental intervention or curricular innovation regardless of sample size. According to Bowen

(1977), effect sizes range from a "small" effect of .10 - .39, "moderate" being .40 - .69, "large" being .70 - .99, and "very large" being anything above 1.00.

- *Ego Judgment* refers to one's ability to make decisions based upon recognition of self-emotion as well as the emotions of others. Persons at higher stages of ego functioning "accept or coordinate more aspects of a given situation, tolerate more ambiguity in complex decisions, and commit to actions based on review of a larger variety of possible actions" (Reiman & Thies-Sprinthall, 1998, p. 45).

- *Lateral Entry Teachers* have been given a position by a school system as a classroom teacher without having prior experience or training in education. According to Teach4NC (2004), lateral entry teachers must work, while teaching, on a plan of study featuring specific courses in education in addition to taking a state licensing examination.

- *Learning Outcomes* are descriptive statements of student behaviors that exhibit achievement of set instructional objectives. For example, "The students will correctly label eight out of ten statements as fact or opinion."

- *Moral/Ethical Judgment* refers to the way in which one reasons about issues regarding social justice ("macromorality"). Recent research has listed moral judgment as just one component of four encompassing the breadth of moral development Rest, Narvaez, Bebeau, & Thoma, 1999). For the purpose of this study, the terms moral and ethical are used interchangeably.

- *Paragraph Completion Method (PCM)* is an instrument designed by Hunt (1971) to measure conceptual judgment. It consists of six prompts or paragraph stems to which individuals reply and is used to measure the way in which one deals with "conflict

and response and orientation towards authority and rules" (Oja & Smulyan, 1989).

Scores on each of the six prompts range from 0 – 3 with a "3" representing the use of

abstract principles and multiple viewpoints in the response.

- *Pattern Matching* allows a researcher to analyze matches and mismatches between a

  predicted pattern and an observed pattern as illustrated in Appendix A (Campbell,

  1975; Trochim, 1989). Establishing a predicted pattern that emerges from a

  theoretical framework increases the validity of findings as the predicted pattern is

  compared to that which is observed.

- *Professional Action* is an observable behavior that can be "conscious and deliberate"

  or "habitual and automatic" (Katz and Raths, 1985, p. 301). It is important to

  distinguish professional action as descriptive in nature versus explanatory.

- *Professional Judgment* is an intermediate step between knowledge and application. It

  provides a bridge from theory to practice (Shulman, 1998) and has been described as

  considering, choosing, and reflecting upon the most justified course of action.

- *Sentence Completion Test (SCT)* was designed by Jane Loevinger (1998) and is a

  measure of ego judgment. It consists of 36 sentence stems which are scored based on

  a series of nine stages moving from Presocial/Impulsive to Conformist and finally to

  Autonomous/Integrated. Those at higher levels of ego judgment show an increased

  tolerance for ambiguity and are able to acknowledge and cope with emotional

  conflict.

Organization of the Dissertation

The remaining sections of this dissertation are organized as follows: Chapter Two

presents a review of the literature regarding the two theoretical propositions stated (cognitive

structures and development with specific connections to moral/ethical, conceptual, and ego domains; and adult growth and development through deliberate psychological and professional programming). An extensive look at methodology is presented in Chapter Three. Case study design is presented as the most appropriate and viable option to study the proposed research questions. In Chapter Four, special attention is given to how the theoretical patterns of mentor judgment converge with the observed patterns in addition to congruence between mentor judgment and action. Finally, Chapter Five is a discussion of the data collected on beginning teachers. Again, convergence or divergence of theoretical and predicted patterns is examined followed by congruence between the judgments and actions of the beginning teachers. Implications for teacher education and professional development are made in Chapter Six.

Summary

The following study examined the dispositions of three mentor teachers and three beginning teachers in relation to their own judgments and actions as well as their relationship with each other and the achievement of their students. Congruence between judgments and actions were explored in three dispositional domains of adult development: moral/ethical, conceptual, and ego. The following questions were investigated using a case study design:

1) How does the professional judgment of mentor teachers correspond to their professional action as they assist in beginning teacher development?

   a) How does the level of moral/ethical judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

   b) How does the level of conceptual judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

   c) How does the level of ego judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

   d) How do these professional judgments and action influence interactions with the beginning teacher?

2) How does the professional judgment of beginning teachers correspond to their professional action as they address the needs of diverse learners?

   a) How does the level of moral/ethical judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

   b) How does the level of conceptual judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

   c) How does the level of ego judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

   d) How do these professional judgments and actions influence interactions with diverse learners?

In the following chapter a review of literature is provided to summarize the current and past conceptualizations of dispositions along with studies linking professional judgment and action within a theory of adult cognitive development and the DPPE previously

illustrated. A final synopsis shows how the research at hand explored those questions left

unanswered by the existing research.

CHAPTER 2 - SELECTED REVIEW OF LITERATURE

Introduction

This literature review is grounded in the theoretical, historical, and conceptual characteristics of dispositions as defined in chapter one; Professional disposition is defined as an attributed characteristic of a teacher that represents a trend of a teacher's judgments and actions in ill-structured contexts. Further, it is assumed that these dispositions, trends in teacher judgments and actions, develop over time in deliberate professional education programs. Realms of dispositions include constructs of adult cognitive processes in the moral/ethical, conceptual, and ego domains with deliberative approaches to foster change in dispositions recognized as developmental clinical assistance. Four strands will be addressed in the chapter: 1) Summation of historical perspectives and current conceptualizations of dispositions including that of the definition established in Chapter One; 2) Description of adult cognitive development as a theoretical framework in terms of three dispositional domains (moral/ethical, conceptual, and ego); 3) Examination of the DPPE (Deliberate Psychological and Professional Education) of developmental clinical assistance as a means of fostering effective dispositions; and 4) Analysis of available research linking professional judgments and professional actions in reference to the DPPE described and adult cognitive development. Discussion of these strands will be followed by a summary of how the current literature shapes, yet does not answer, the proposed research questions:

How does the professional judgment of mentor teachers correspond to their professional action as they assist in beginning teacher development?

How does the level of moral/ethical judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

How does the level of conceptual judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

How does the level of ego judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

How do these professional judgments and actions influence interactions with the beginning teacher?

How does the professional judgment of beginning teachers correspond to their professional action as they address the needs of diverse learners?

How does the level of moral/ethical judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

How does the level of conceptual judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

How does the level of ego judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

How do these professional judgments and actions influence interactions with diverse learners?

Studies were selected for review based upon historical significance (scholars that are referenced throughout current literature), adherence to a view of dispositions in terms of

cognition as a point of origin, and connection of teacher judgments and actions through the DPPE described.

Tracing the Conceptualization of Dispositions from 1892 to Today

In 1892, William James presented a series of lectures to teachers in which he made psychology both practical and understandable. Although published in 1904, James' ideas that teachers should explore the principles underlying their actions are proving relevant in the 21st century.

> Every acquired reaction is, as a rule, either a complication grafted on a native
>
> reaction, or a substitute for a native reaction, which the same object originally tended
>
> to provoke. The teacher's art consists in bringing about the substitution or
>
> complication, and success in the art of presupposes a sympathetic acquaintance with
>
> the reactive tendencies natively there. (p. 39)

Would James have been able to substitute the word "disposition" for his "acquired reaction"? If so, dispositions could then be described as the behaviors teachers tend to exhibit based upon native reactions (professional judgments and actions) in reference to certain environmental stimuli. James expounded further in Hamachek (1968) when he said the art of teaching is being able to look at a child "at once intuitive and analytic" (p. 206). He spoke of the "science of ethics" as a way in which psychology assists us in looking critically and articulately at the mistakes we have made in reference to changing future behavior (p. 205). He asserted emphatically what "disposition" a classroom teacher should have. "To know psychology, therefore, is absolutely no guarantee that we shall be good teachers…we must have an additional endowment altogether, a happy tact and ingenuity to tell us what definite

things to say and do when the pupil is before us" (p. 205). It is that "additional endowment" which has helped label those teachers considered "high-quality".

During the same historical time period, Dewey (1904) noted the challenges facing teachers including not only growth in knowledge of subject matter and foundations of education, but skills in managing a classroom, and developing "dispositions toward inquiry, reflection, ethical judgment, and an orientation to direct attention to the underlying intellectual, affective, and motivational processes of students" (Reiman & Johnson, 2004, p. 5). The challenges iterated by Dewey are still present today.

Hamachek (1968) published an anthology of theory and research that delved into the dynamics of human learning. In his chapter "Classroom Dynamics and Teaching Process", Hamachek cited numerous studies seeking to discover what makes an effective teacher. One such study, conducted by Witty revealed "good dispositions and consistent behavior" as one of the top traits of teachers as identified by students participating in the "Quiz Kids" radio program (p. 189). The radio broadcast program offered a scholarship to a student who wrote the most convincing and effective essay entitled, "The Teacher Who Has Helped Me the Most" (Witty, 1947). From the 12,000 letters received, (four thousand letters for each age range: up to age nine, age nine to fourteen, and age fourteen and up), characteristics were determined. A sample of each of the age group letters (150) was then tallied by three other people to obtain fairly consistent results of traits tallied. Although the sample was not described in detail and lacked validity in many respects, the common traits of effective teachers remained consistent across age groups with "good disposition and consistent behavior," "cooperative, democratic attitude," "kindliness and consideration," and "patience," all ranking close, if not at the top (p. 663-664). Further, students preferred a

"mental hygiene approach in the classroom" along with teachers who maintained "good dispositions" (p. 668). Witty concluded his study with a call for teachers who could adjust their own behaviors and emotions to the nature of the classroom making it in a sense more learner centered. Although cognition is not mentioned and specificity of the definition of dispositions remained unclear, the idea of a teacher having to "reshape his idea of self" is concurrent with the idea of actually changing a person in order to change his or her disposition. Other studies discussed by Hamachek offer similar conclusions. Without specifically referring to "dispositions" these studies list disposition equivalent characteristics of effective teachers such as being supportive, yet challenging, flexible in teaching approaches, and sensitive to classroom conditions and interactions (Barr, 1929; Flanders, 1960; Spaulding, 1963).

Published in 1962, *Perceiving, Behaving, and Becoming* presented several views on human interaction. Perhaps most significant was the work of Kelley, Combs, Rogers, and Maslow, that contended that beliefs and values go beyond the intellect to a deeper level of cognition. It is at this level that one must examine the structures that affect action and behavior. Encouraging teachers to interpret learning as successive approximations and hold strong ethical convictions regarding education will lead to an increased knowledge of how their behavior effects students.

Nearly twenty years later, Joyce, Brown, and Peck (1981), in reference to teacher education, stated, "The effort of the teacher educator has to focus on the development of a rich, many-sided, actualizing self . . ." (p. 17). In their book, over fifty authors presented papers on the relationships between teachers and learners. Several sections addressed the challenge of identifying competencies of quality teaching in respect to personal character and

distinct humanness. Peck and Joyce (1981) emphasized strength and sensitivity as imperative qualities of successful teachers who are accountable for structuring responsible teaching and the classroom social structure. The study consisted of 27 master's level teacher education students enrolled in a class emphasizing strength and sensitivity. Role-playing was utilized to measure teacher reactions to two situations, one necessitating the use of sensitivity and awareness and the other control and strength. The results of the study conclude that the sensitivity/awareness characteristics and the control/strength characteristic have a relationship to effective teaching and suggest that development in one area is highly correlated to that of the other. Further, these two factors, which may be viewed as dispositions, are essential to communication in the classroom setting. Other domains available in the book mention decision-making, flexibility, utilization of feedback, and variation in models of teaching as dispositions marking an effective teacher.

The actual term "dispositions" began to gain prominence in educational studies in the early 1980s. Buss and Craik (1983) defined dispositions as "summaries of act frequencies" (p. 105) making it different from behavior which is viewed in light of a single act. The research, which works to move the idea of dispositions from personality frameworks to more of a psychological and behavioral perspective, maintains that dispositions are measured by the rate at which they occur absent of characteristics of cause or explanation. However, the authors did work to analyze dispositions in terms of their internal structure or "natural cognitive categories" studying means by which participants grouped acts in certain dispositional categories (p. 109). Although not addressed in their research, the idea of situational analysis in relation to dispositional studies emerged when Buss and Craik aggregated the established categories by context.

Still questions remained. For example, how are dispositions different from constructs

such as habits or beliefs? A summary of the perspectives offered by Katz and Raths (1985)

began to assist in answering such questions. Their analysis was based on the idea of

dispositions as a conceptual framework built on the works of Combs, Joyce, and Heath.

According to Combs (1969), effective teaching should be viewed as a helping profession. It

is marked by understanding student ideas and feelings, reassuring and encouraging students,

having a rapport with students, and viewing students as fellow workers. Joyce (1972) listed

exploring and experimenting, using various methods of teaching, adjusting plans to student

needs, and being cognizant of theories of child development as four attributes of effective

teaching. Lastly, from a more psychological approach, Heath (1980) conducted a

longitudinal study of college students and discovered five characteristics of "happiness" in

adults: the symbolizing and interpreting of personal experiences, interpreting perspective of

others, establishing relationships, making judgments with little bias, and solving problems

independently. Translated into education, these five characteristics represent teachers who

are able to take in multiple perspectives when making classroom decisions and build healthy,

trusting relationships with colleagues and students.

The framework developed from the work of Combs, Joyce, and Heath combined with

that of Buss and Craik (1983) resulted in a more precise definition of dispositions: "An

attributed characteristic of a teacher, one that summarizes the trend of a teacher's actions in

particular contexts" (Katz & Raths, 1985, p. 301). In this respect the idea of a disposition

rests in the ability and likelihood to use an attained skill. The addition of a contextual

element to the definition insinuates the idea of dispositions in terms of the professional arena

of effective classroom teaching. Perhaps even more helpful, Katz and Raths go on to clarify

the misconceptions when using the term disposition synonymously with the terms skills, attitudes, habits, and traits. Skills, according to the authors, denote a sense of mastery which one either has or not. Unlike dispositions, skills may be used at the discretion of the person who possesses them. Attitudes are seen more as the predisposition to act based on an organization of beliefs. Habits describe those behaviors that are unintentional and are not subject to reflection after they occur whereas dispositions consist of deliberate acts. Finally, traits are distinguished from dispositions in two ways, emotional state and intensity. Traits depict a person's character rather than describe trends in his or her actions. These cannot be determined through events such as giving accurate directions or learning to ride a bike, but are more dependent on situations that test a person's traits such as the temptation to deceive.

In 1998, Lee Shulman published an article relating teaching to other professions. He summarized six main characteristic shared amongst professions: obligation of service to others; understanding of a theoretical kind; skilled practice or performance; use of judgment in times of uncertainty; interaction of theory and practice that leads to learning; and the engagement of a professional community. For Shulman, professional judgment was needed to provide a link between the research and theory of a profession to action that often emerges. It is this judgment that often leads to growth and development in domains of social, reflective, and moral disposition (Mentkowski & Associates, 2000; Oser, Dick, & Patry, 1992).

A second characteristic shared by professionals was the call to serve or professional actions. Mirroring Dewey's propositions from 1904, Shulman stated that teachers must be educated to develop a disposition toward inquiry, consistently reflecting and analyzing their own actions. Shulman's research has contributed to the development of a more

encompassing definition of dispositions (professional judgments and professional actions) while maintaining a framework of cognitive theory. Before reviewing the final definition, it is necessary to address the meaning of dispositions set forth by bodies governing teacher accreditation programs and discuss why it is neither appropriate nor meaningful for the field.

The Network to Study Dispositions published a definition of dispositions based in teacher perception that included "attitudes, beliefs, interests, appreciations, values, and modes of adjustment" (Taylor &Wasicsko, 2000, p. 2). Teachers hold certain perceptions about themselves, others, and education in general. It is these perceptions that often determine the degree of teacher effectiveness. Although this strand of research is fairly new, it does not seem based in deep structure considering change has been suggested to occur in "one-week workshops" (p. 8).

The National Council for Accreditation of Teacher Education (NCATE) sets standards for many colleges and universities by which their teacher educator programs are evaluated for accreditation. NCATE maintains its use of terms and concepts are understandable, teachable, and measurable. Throughout the standards, a recurrent theme exists that graduates of teacher education programs accredited by NCATE leave their programs competent in the "knowledge, skills, and dispositions necessary to help all students learn" (NCATE, 2002, p. 1). With this in mind, NCATE provides the following definition of dispositions:

> The values, commitments, and professional ethics that influence behaviors toward
> students, families, colleagues, and communities, and affect student learning,
> motivation, and development as well as the educator's own professional growth.
> Dispositions are guided by beliefs and attitudes related to values such as caring,

fairness, honesty, responsibility, and social justice. For example, they might include

a belief that all students can learn, a vision of high and challenging standards, or a

commitment to a safe and supportive learning environment (p. 53).

The complexity of this definition has left many professors questioning what exactly is meant

by the term and wondering how to measure such nebulous qualities as beliefs, attitudes, and

values (Johnson, 2003). Including such terms in the definition also contradicts the works of

Katz and Raths (1985). The definition does however, imply the concentration on action as

proposed by Shulman (1998) by stating the premise "… professional ethics that influence

behaviors". But when posing an example of a disposition the following is stated, "a vision of

high and challenging standards" or "a belief that all students can learn". Such statements are

devoid of action.

Research by Reiman and Johnson (2004) recognizes the three vital components of the

definition of a disposition. First there is the reasoning or professional judgment. Second,

disposition consists of action or behavior resulting from the judgment. Finally, both the

judgment and the action are contextual, occurring in ill-structured situations or times of

uncertainty. A culmination of these components gives rise to the following definition that

will be used for the purpose of this study: Dispositions are attributed characteristics of a

teacher that represents a trend of a teacher's judgments and actions in ill-structured contexts.

Further, it is assumed that these dispositions, trends in teacher judgments and actions,

develop over time in deliberate professional education programs (Reiman & Johnson, 2003;

Buss & Craik, 1983; Katz & Raths, 1985; NCATE, 2002). Table 2.1 summarizes the

research to date regarding defining and conceptualizing dispositions.

Table 2.1: Historical Conceptions of Dispositions

Date	Title/Author	Link to Dispositions
1892 – 1904	*Talks to Teachers on Psychology* William James	-Spoke of teacher reactions to students -Teachers need "additional endowments" versus just knowledge to be successful
1904	*The Relation of Theory to Practice in Education* John Dewey	-Dispositions as inquiry, reflection, ethical judgment, and an orientation to direct attention to the underlying intellectual, affective, and motivational processes of students
1947	*An Analysis of the Personality Traits of the Effective Teacher* Paul Witty	-Students surveyed noted "good disposition" as a top effective teacher characteristic
1962	*Perceiving, Behaving, and Becoming* Association for Supervision and Curriculum Development	-Teachers hold deep convictions which affect action -Learning can lead to change in behavior
1981	*Flexibility in Teaching* Bruce R. Joyce Clark C. Brown Lucy Peck	-Strength and sensitivity essential in classroom communication -Ability to "read and flex" is imperative to student success
1983	*The Act Frequency Approach to Personality* D. M. Buss K. H. Craik	-Dispositions as "summaries of act frequencies"
1985	*Dispositions as Goals for Teacher Education* Lillian G. Katz James D. Raths	- Disposition as an "attributed characteristic, one that summarizes the trend of a teacher's actions in particular contexts"
1998	*Theory, Practice, and the Education of the Professionals* Lee S. Shulman	-Professional judgment -Professional action
2000	*The Disposition to Teach* The Network to Study Dispositions	-Attitudes, beliefs, interests, appreciations, values, and modes of adjustment
2002	*Published Standards* National Council for Accreditation of Teacher Education	- The values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and communities, and affect student learning, motivation, and development as well as the educator's own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. For example, they might include a belief that all students can learn, a vision of high and challenging standards, or a commitment to a safe and supportive learning environment.

Table 2.1 (continued)

2003	*Teacher Professional Judgment* Alan J. Reiman Lisa E. Johnson	- An attributed characteristic of a teacher that represents a trend of a teacher's judgments and actions in ill-structured contexts. Further, it is assumed that these dispositions, trends in teacher judgments and actions, develop over time in deliberate professional education programs

As seen in Table 2.1, the definition of dispositions has an extended history in educational literature. However, the lack of consistency and clarity permeates standards and texts. The final definition, proposed by Reiman and Johnson (2004), is precise in nature with three major components: professional action, professional judgment and contextual information (deliberate programming). The theoretical foundation of the definition, adult cognitive development, will now be examined.

Adult Cognitive Development

Given the proposed definition of dispositions, investigation in the cognitive processes of adults that result in certain judgments and actions is necessary. Literature that maintains a foundational basis of adult development theory through cognition was reviewed. Moral/ethical development, ego development, and conceptual development was integrated as vital components for determining predictive patterns of teacher professional judgments and actions. Establishing such a pattern supports the theoretical proposition for adult cognition in reference to both classroom teachers and mentors. The following section begins by illustrating the theoretical frameworks of the three dispositional domains followed by empirical evidence of how each domain connects to the DPPE described.

The Moral/Ethical Domain

Lawrence Kohlberg's Theory of Moral Development

It was a time when the Civil Rights Movement was on the minds of Americans. Martin Luther King was seen as a hero to some and a lawbreaker to others. The Vietnam War provoked protests like none other. The 1960s gave rise to monumental questions of morality and social justice. Lawrence Kohlberg, influence by the climate of the 60s, advocated the significance of the individual as the moral determinant of right and wrong. Kohlberg disputed the historical foundation that morality paralleled socialization - adherence to social norms implied morality. He asserted that it is the individual who interprets his or her own experience and this interpretation, followed by psychological meaning making, results in a moral judgment. This process, he claimed, is based on an approach taken by Piaget in the 1950's:

> People construct reality and meaning through thinking processes thus implying a focus on cognition.
>
> Moral judgment is organized in stages; people advance developmentally somewhat like climbing a staircase, going one step at a time without skipping steps.
>
> Data can be collected by posing problems to individuals, having them solve the problems, then inquiring into the means and justifications by which the problem was solved.
>
> Questions should be raised as to how different ages used different strategies for problem solving (Rest & Narvaez, 1994).

Kohlberg used this foundation to establish his theory with two primary principles: moral decision making can be explained in six universal and invariant stages; and, the stages

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themselves are developmentally sequenced from less to more complex judgments based upon the concept of how to organize cooperation. These stages include:

Level 1: *Pre-Conventional Level*

> Stage 1 – Termed obedient morality, there is a concern with the self. Getting along with others often means doing what you are told.

> Stage 2 – There is simple exchange with others based upon how the self will benefit. Recognizes that others have their own interests is a significant increase in development, although everyone is seen as being self-centered.

Level 2: *Conventional Level*

> Stage 3 – A need to make friends exists and is accomplished by being nice and considerate. There is recognition that people can be involved in long-term relationships and there are the beginnings of perspective taking.

> Stage 4 – Concern with social order exists by increasing the realm of cooperation beyond friends and relatives to those considered strangers, enemies, etc. Laws are known and apply to everyone; people should behave in accordance with the established laws.

Level 3: *Post-Conventional Level*

> Stage 5 – Societal rights are seen through due process procedures. Morality is viewed politically with decisions being made according to group consensus.

Stage 6 – Based upon ethical principles that life's benefits and burdens should be balanced wherein each person's stake should be optimized.

To assess moral reasoning (ways in which an individual thinks about problems of social justice), Kohlberg designed an open-ended interview in which individuals responded to dilemmas. The Moral Judgment Interview (Colby & Kohlberg, 1987) along with the theory itself received wide acclaim and significant criticism. Perhaps the most widely tested, Kohlberg's theory of development had critics asking, "How can such a theory be universal?" and "Is it appropriate to evaluate one's moral judgment based only on what they can explain verbally?" Blasi (1980) questioned Kohlberg's lack of attention to moral action declaring that moral reasoning should be centered upon individual practices (assessed independently and objectively), and then related back to moral thinking. The question of universality and invariance was studied in numerous accounts (Boyes & Walker, 1988; Snarey, 1985; Gielen, 1996; & Lei, 1994). The results of the studies were:

- Scores on moral maturity increased with education and age (except in a sample of Polish participants).

- Americans scored average in comparison with other nations on moral maturity.

- Two samples from South India and Turkey showed no evidence of principled moral reasoning.

- A "Western bias" did not appear to exist in Kohlberg's theory (Taiwanese university students are as least as likely to express principled moral reasoning as students from other universities).

- Individualistic over collectivistic forms of reasoning did not appear to be favored (Reiman & Peace, 2004).

Questions pertaining to the Moral Judgment Interview and the lack of acknowledgment of moral action and other philosophies gave rise to the Neo-Kohlbergian theory.

The Neo-Kohlbergian Theory

In 1979, Rest designed the DIT (Defining Issues Test) as an alternative to the Moral Judgment Interview. The DIT is a projective multiple-choice test meaning the participants have to supply meaning to the items being rated. By measuring tacit knowledge, the DIT can assess moral judgment that is not readily available for verbal interpretation, but embedded in individual schema (described shortly) (Rest, Narvaez, Bebeau, & Thoma, 1999). According to Narvaez and Bock (2002), schemas measured by the DIT may not be stored verbally. Further, explanation does not develop concurrently with understanding. Hence, the DIT surpasses the capability of the MJI (Moral Judgment Interview) by going beyond assessing only that moral judgment which can be verbalized. Similar to the MJI, the DIT provides an index of postconventional justification ("P score") or the extent to which sharable, social ideals appeal to a person ("postconventional" has recently replaced "principled" in light of reactions from moral philosophers connected to Principlism) (Rest *et al.*, 1999). The P score can range from 0 – 95% with the average for teachers being in the 40s (Chang, 1994).

Used for over 25 years in thousands of studies, results from the DIT have been used to create a Neo-Kohlberian theory as an approach to studying individual construction and understanding of moral epistemology. Both theories emphasize, "basic human rights, equal individual moral status, and rational, autonomous individuals who are free to enter into contracts and obligations…some ways of thinking are better at supporting respect for individual human rights than are other ways of thinking" (Narvaez, 2002, p. 2). Adaptations

of Kohlberg's theory were made in response to decades of criticism however, the following

four points of emphasis remain key to the Neo-Kohlberian theory:

1.   An emphasis on rationality with a starting point of cognition;

2.   An emphasis on constructivism of personal epistemological categories;

3.   An emphasis on individual development; and

4.   An emphasis on the conventional to postconventional shift (Narvaez, 2002).

Rest and his associates (1999) address the changes and additions made to Kohlberg's

theory in the Neo-Kohlbergian theory. First, a shift from hard to soft stages of development

was suggested. Instead of progression through stages being like a staircase, growth should be

viewed more in terms of shifting the distribution of thinking. As new strategies are

increasingly used, less complex strategies remain yet are used less often. Second, is the

incorporation of a schema theory. A schema is a cognitive structure of the long-term

memory that works to facilitate the processing of information (Walker, 2002). It is formed

when existing similarities and recurrences of experiences work to interpret new

environmental stimulus. Narvaez and Bock (2002) described schemas as the supervisors of

decision making and reasoning, acting for the most part without one's awareness. The

integration of schema into the theory of moral judgment acknowledged the presence of other

ideologies (i.e. religious or cultural) interacting with moral structures. In fact, Rest and his

associates, through factor-analytical studies of DIT responses, argue that the DIT is based on

a social-cognitive schema theory that can further explain the moral construct through

variables of accessibility (activation of available knowledge) and automaticity or chronic

accessibility (Walker, 2002; Narvaez, 2002).   The emphasis on these schemas over stages is

the third modification to Kohlberg's original theory. Three moral schemas have been

developed as ways of addressing the organization of society-wide cooperation (versus cooperation with friends or relatives) and are presented below:

1. *Personal Interest Schema* (related to Kohlberg's Stages 2 and 3) is characterized by a lack of sociocentric perspective; individuals view the world in terms of micro-morality (close friends and relatives) relationships only (Rest, Narvaez, Thoma, & Bebeau, 2000). Decisions are based upon the personal stake the decision-maker has in the situation and concerns derive from such notions as survival and getting ahead (Narvaez & Bock, 2002).

2. *Maintaining Norms Schema* (related to Kohlberg's Stage 4) shows an increase in an individual's ability to conceptualize society-wide cooperation and emphasizes norms that are clear and uniform. According to Rest and his associates (2000), the Maintaining Norms Schema consists of five elements. (a) There is a need for a set of accepted norms to govern a society. (b) The accepted norms must apply to all people in the society. (c) Norms should have clarity and be uniform and categorical. (e) Reciprocity of the norms is seen in light of each citizen obeying and expecting the same from others. (e) An establishment of hierarchical role structures exists (i.e., teacher – student or guardian – child). The social system is the most important entity, respecting authority is, in essence, respecting the system.

3. *Postconventional Schema* (related to Kohlberg's Stage 5-6) is thinking that is based in ideals. Four specific components describe the postconventional schema (Rest *et al*., 1999). (a) There is a primacy of moral criteria. Social norms are not set, but are alterable and relative. (b) An appeal to an ideal exists in which

idealized ways exist for humans to interrelate. (c) Ideals are both shareable and

open to justification and scrutiny. (d) There is recognition of full reciprocity of

social norms. Norms must be uniformly applied and unbiased in favor of some at

another's expense. The most significant difference between the Postconventional

and the Maintaining Norms Schema is how consensus is gained with the

Postconventional appealing to an ideal and logical coherence while the

Maintaining Norms sticks with an already established set of norms without

questioning authority.

These schemas represent a broader and more complete view of moral judgment as measured

and supported by thousands of responses on the DIT (Rest, *et al.*, 1999).

Finally the fourth change made by Rest and his associates includes the creation of a

four-component model. This is in response to criticism to "single-variable theories of moral

psychology that are simply untenable in the face of the complexity of moral functioning"

(Walker, 2002, p. 354). The model includes moral sensitivity (empathy), moral judgment,

moral motivation, and moral character. Moral sensitivity involves the ability to interpret the

moral dilemmas in a situation and includes the reactions and feelings of others (Bebeau,

2002; Walker, 2002). Being morally or ethically sensitive involves being aware of various

courses of action that can be taken and acknowledging the consequences incurred from those

courses. Empathy and role-taking skills are necessary components of moral sensitivity, and

one attempts to see things from the perspective of others (Bebeau, 2002). The existence of

moral sensitivity is confirmed by Bebeau and has been related to cultural backgrounds,

expertise in content, and developmental level (Narvaez, 2002). Such findings can be

connected to the use of schema theory in researching moral sensitivity. Moral judgment is a

deliberation over possible courses of action. Walker (2002) divides moral judgment into two categories. First, there is an identification of the moral ideal followed by an integration of "shared moral norms and individual moral principles" (p. 355). Moral judgment, when described by developmental change, can be measured by the three schemas previously described. Moral motivation is the act of prioritizing the possible courses of action with other competing values or concerns then making a commitment and taking responsibility for one such course (Walker, 2002). As acknowledged by Bebeau (2002), there are other legitimate concerns such as career pressure, relationships, and "idiosyncratic personal concerns", which are not deemed compatible with certain options for moral action (p. 285). Moral character is the implementation of the course of action decided upon; professional character as profession action. Characteristics such as courage and perseverance can impact moral character along with being weak-willed or easily disheartened. Although moral judgment has been the most widely studied of the components and the component of the model chosen for this research, parallels may exist between other domains of cognitive development (ego and conceptual) and the components of sensitivity, motivation, and character. This will be explored further in summary section of this chapter as well as in the implications for future research.

Schrader's Theory of Metacognition

Other theories have emerged from the works of Kohlberg and Rest and his associates. Schrader (1999) calls for a model incorporating metacognition in addition to moral judgment and action. In the context of higher education, Schrader makes the following statement:

> We need to reconceptualize the moral judgment-action question in terms of moral
> development and conscious reflection on the metacognitive components of students'

thinking so there is (1) greater consistency between moral judgment and ethical moral action, and (2) there are increased opportunities for students' taking responsibility for reflective thought and, thus, moral development (p. 2).

Schrader includes metacognition in her theoretical model of moral development as awareness of the thinking process that causes the individual to engage in reflection that may affect his or her moral decision. Grounded in Piaget's idea of equilibration, Schrader's unidimentional model gives a framework for looking at the dynamics that may occur between moral judgment and moral action.

The Ego Domain

Early Conceptions and Transformations

Say the word "ego" and Freud usually comes to mind however, throughout the past decades, the ego domain has emerged as a theory of its own, separate from, yet sharing a history with psychoanalysis. Freud actually rarely used the term "ego". The more common terminology was "das Ich" literally translated to "the I". In 1911, one of Freud's students broke from Freud's theory to structure his own conceptualization of ego known as the "style of life". Adler described personality as a unification of many aspects of the self, including individuality, self-image, a system of facing problems, and attitude towards life in general (Loevinger, 1982). He saw the ego as a frame of reference through which a person is protected from observations that are unwanted or inassimilable. This concept, termed "tendentious apperception" is the basis for the projective technique used today for assessing ego development (Loevinger, 1976, p. 9). Alder's framework was followed by others (Sullivan, Balwin, Piaget, and Erikson) who looked to further the idea that development of the ego was applicable to all ages.

Erikson was a pioneer of studies of interaction between persons and their environment with each acting upon and shaping the other. One component of this interaction was the epigenetic principle. Like Piaget's concept of equilibration, Erikson's epigenetic principle described a drive in adults to adapt and acquire more complex systems of thinking. Development was not random nor was it automatic, but dependent on external factors. Erikson identified eight periods of changes from infancy to adulthood including the following three periods that were applicable to adult development and more specifically the teaching profession (Reiman and Peace, 2004):

- Period 6: Intimacy versus Isolation – Educational institutions do not seem to be contexts in which interaction occurs naturally and on a regular basis thus causing many teachers to feel isolated. Programs promoting more collaboration are needed to foster intimacy in adulthood.

- Period 7: Generativity versus Self-Absorption – Not only does generativity imply a need to care and pass knowledge to others, but it also emphasizes a revitalization of the self. This is evident in situations where a teacher passes on knowledge and information to students and mentors coach and assist beginning educators.

- Period 8: Integrity versus Despair – Integrity manifests in the opportunities one has to share experiences and advanced knowledge of life with others. Retired teachers being invited back to the schools or educators presenting at conferences supports the need for integrity.

Loevinger's Theory of Ego Development

Loevinger (1976) envisioned the conception of ego in four main distinctions from past theories:

1. Stages are potential fixation points and hence define types of children and adults.

2. The stage conception is structural (there is an inner logic to the stages and to their progression).

3. There are specific tests, experiments, or research techniques that become instruments for advancing knowledge in the domain.

4. The conception is applicable to all ages (p. 11).

Ego was viewed as a construct of personality that worked like an executive seeking to make sense and integrate experience. Loevinger states, "Ego development is a major dimension of individual differences… ego provides the frame of reference that structures one's world" (p. 5 and p. 9). Her theory of ego development "provides a system of meaning which the individual imposes upon experience" (Oja & Smulyan, 1989, p. 100). Connections to the early works in ego development by Adler can be found in Loevinger's thoughts about the purpose of the ego being to "maintain its stability, its identity, and its coherence by selectively gating out observations inconsistent with its current state" (Hy & Loevinger, 1996, p. 4). It is based in the following ten stages:

1. *Presocial Stage* is characteristic of infants trying to distinguish themselves from their environment. Remaining in this stage for a significantly long period is known as autistic according to Loevinger's theory.

2. *Symbiotic Stage* acknowledges the relationship with the main caregiver (i.e. mother) and promotes the differentiation of self from non-self as a continuation of the presocial stage.

3. *Impulsive Stage* sees the beginning of an identity with impulses and constraints followed by rewards and punishments. Orientation is in the present and others are viewed in light of what they can give.

4. *Self-Protective Stage* notes an understanding of rules, but an inability to accept blame or criticism. Material objects such as money measure the goodness of life.

5. *Conformist Stage* implies a compliance with outside rules. Persons are beginning to see themselves as part of a larger group. They seek approval and comply with authority to satisfy a strong need for belonging. The majority of most social groups are said to be at the conformist stage.

6. *Self-Aware Stage* is recognized as the modal level of operation for adults and comes with an increased awareness of self and the various possibilities in life. Rules remain central to this stage although recognition of exceptions begins.

7. *Conscientious Stage* finds a replacement of external rules and norms to more internalized structures of ideals and goals that are self-evaluated. A sense of responsibility for others is characteristic of this stage along with the ability to take on the perspective of others.

8. *Individualistic Stage* is marked by an increase in tolerance for differences and ambiguity. Relationships become more intense and there is an increased acceptance of individuality.

9. *Autonomous Stage* is characteristic of persons acknowledging and coping with inner conflict. They begin to see shades of gray as opposed to everything in black and white. There is an understanding of the need for other's autonomy recognizing the importance in letting people make mistakes. Self-fulfillment is a goal.

10. *Integrated Stage* sees very few instances and is thus difficult to describe. Persons at this stage are self-actualized, reaching an inner peace.

Loevinger developed the WUSCT (Washington State University Sentence Completion Test, Hy & Loevinger, 1996) as a projective measure of one's stage of ego development. Using sentence completions, the WUSCT allows for the subject to use his or her own frame of reference to complete question stems. The test was developed by Loevinger to study the personality patterns of women after decades of studies focused on white, male subjects (Loevinger, 1998). Cross-cultural studies have also been conducted with the WUSCT, which has been translated into at least 11 different languages (Reiman & Peace, 2004). Implications for teachers include the increase in self-awareness and self-understanding that can influence communication with and behavior towards others. Scores on the SCT can be interpreted as such: Level 3 as Conformist; Level 3/4 as Self-Aware; Level 4 as Conscientious; Level 4/5 as Individualistic; and Level 5 as Autonomous. Since some stages are considered transition stages, the following alignment is used for interpretation of scores:

1	2	Δ	Δ/3	3	3/4	4	4/5	5	6
1	2	3	4	5	6	7	8	9	10

For example, a score of "6" represents someone who is using ego judgment at the Self-Aware level.

Emotional Intelligence and Decision Making

Related to the conceptualization presented by Loevinger is the theory of emotional intelligence. Stipulating the present day view of intelligence was too narrow, Daniel Goleman (1995) constructed a theory of emotional intelligence. He described people that were "emotionally adept" as those that "know and manage their own feelings well, and who read and deal effectively with other people's feelings" (p. 36). Making distinctions between academic and emotional intelligence, Goleman listed the following characteristics as central to being successful relating to one's self and others:

- Knowing one's emotions, being self-aware and recognizing feelings as they are happening;

- Managing emotions in ways that are appropriate;

- Motivating oneself in terms of a goal;

- Recognizing emotions in others, or empathy; and

- Handling relationships.

Goleman's theory directly related to ego development in its aspects of executive functioning. Referred to as "meta-ability", emotional intelligence could be viewed as "determining how well we can use whatever other skills we have, including raw intellect" (p. 36).

Damasio (2001) investigated connections between emotion and decision-making with the condition that decisions are not made without an integration of emotion. Four considerations were proposed. First, emotion as an expression of an individual provided a direct insight into how that individual related to his or her environment. Second, Damsio viewed emotion as critical to survival. Third, emotion was a key component in understanding how memory functions. Finally, fourth and most significant to the research at

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hand, emotion "plays a role in reasoning and decision making" and allowed for a more in depth understanding of an individual's expression of "high reason, ethics, law, and artistic, scientific, and technological creativity" (p. 102). An important component of Damasio's research connected emotions and ego development to the idea of dispositions as professional judgments and actions. He suggested that there are two results of emotions, one being cognitive representations of emotional states (judgments) and the other being the behaviors (actions) that result.

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The Conceptual/Reflective Domain

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Hunt's Theory of Conceptual Development

Perhaps best known for his work with children, Piaget's studies of cognitive development made a tremendous impact on understanding how adults viewed the world around them, their environment. His stages of thought from concrete to abstract were the basis for understanding Hunt's theory of conceptual levels. "From a developmental view, conceptual level can be considered in terms of increasing conceptual complexity, increasing interpersonal maturity, and increasing understanding of oneself and others" (Hunt, 1975, p. 222). Oja and Smulyan (1989) broke this definition down into two main components. First is the degree of abstractness in an individual or the "ability to separate, integrate, and/or discriminate many conflicting conditions" (p. 104). Second, is the degree of interpersonal maturity or self-responsibility. Like other developmental theories, Hunt's classification system was not permanent, but subject to change as an individual interacted with his or her environment thus enhancing the ability to work with others (interpersonal development). Reiman and Thies-Sprinthall (1998) summarizes Hunt's three stage model:

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- Stage A – Concrete conceptual level: Thinking tends to be concrete. Rules are considered fixed and unalterable. Pleasing others is desirable. There is a strong preference for high structured learning activities.

- Stage B – Concrete/abstract conceptual level: There is greater awareness of alternative strategies for solving problems as well as a growing awareness of the importance of feelings. [Individuals] are more open to new ideas and can tolerate some ambiguity.

- Stage C – Abstract conceptual level: [Individuals] weigh and balance alternatives, take risks, value collaboration and exhibit evidence of synthesis and integration in complex intellectual and interpersonal functions. There is a full acceptance of the consequences of one's behavior (p. 44-45).

Hunt was especially interested in teachers through his work at the Ontario Institute for Studies in Education. When developing his theory, he found that teachers at higher conceptual levels exhibited characteristics such as being more adaptive to students' needs (both emotional and academic), more empathetic, and more interested in new innovations in teaching. His findings can be summarized with the three R's: responsiveness, reciprocity, and reflexivity (Hunt, 1971). In 1976, Hunt furthered the theory of conceptual development by describing a bimodal description of teacher adaptation. First is the ability to "read" cues given by students such as misunderstandings or disobedience. Second, the teacher must "flex" the communicative approach used in response to the information presented by the students (O'Keefe & Johnston, 1989). Hunt (1976) made a connection between his notion of reading and flexing and Erikson's scheme of the B-P-E paradigm (Behavior – Person –

Environment). Individuals are shaped by their environment while the environment is shaped by the individual. Behavior, then, is a function of person-environment interaction.

A final element to explore in relation to dispositions in mentoring and teaching is Hunt's Matching Model. Hunt (1971) discovered that the learning environment must promote the development of conceptual level by matching where the learner is in terms of stage. For example, he found that learners at a high conceptual level preferred environments that were low structured allowing them to be more self-directed. The opposite also applied. Those at low conceptual levels preferred to learn in environments of high structure with constant feedback and guidance.

A means of assessing conceptual level was designed by Hunt and his associates. The PCM (Paragraph Completion Method, 1977) consists of six prompts or paragraph stems to which individuals reply. It is used to measure the way in which an individual deals with "conflict and response and orientation towards authority and rules" (Oja & Smulyan, 1989, p.105). Three of the stems assess how individuals contemplate conflict and uncertainty while the other three assess how individuals think about authority and the structure of rules. Each response generates a score from $0 - 3$. An overall score is received by averaging the three highest response scores. Scores have been construed as $0.5 - 1.0$ being a low conceptual level score, $1.1 - 1.4$ being moderately low, $1.5 - 1.9$ being moderately high, and 2.0 and above being a high conceptual level score. Oja and Smulyan (1989) offer the following descriptive interpretation of scores that parallel Hunt's three conceptual levels:

Score of 1 = Categorical judgments, stereotyped thought. Other directed; accepts single
    rules.

Score of 2 = Self-delineation, awareness of alternatives, and awareness of emotions.

Score of 3 = Abstract internal principles, awareness of multiple viewpoints.

The PCM has been used in over 200 studies and was tested by Miller (1981) who conducted a review with over 60 of the studies confirming the validity and reliability of the instrument. Through his analysis, a correlation between teachers' conceptual level and teacher effectiveness was shown. This analysis will be discussed in greater detail in an upcoming section.

King and Kitchener's Theory of Reflective Judgment

Similar to Hunt's theory in relation to transformation of thought processes over time, King and Kitchener (1994) studied reflective judgment. An idea first proposed by John Dewey, reflectivity is necessary when problems arise and uncertainty exists in how to solve problems. King and Kitchener were inspired by the underlying organization of problem-solving reasoning in which individuals engaged. Based on the work of Dewey, Perry, Harvey, Schroder, and Broughton a model was formulated involving seven stages (Kitchener, 1983). Before describing the stages, it must be noted that the model of reflective judgment explicitly lies in one's ability to reason about ill-structured problems. Such problems cannot be resolved with a high degree of certainty. In fact, experts often disagree about the best solution to an ill-structured problem. An example of a well-structured problem is solving for a variable in an algebraic equation whereas deciding how to dispose of nuclear waste presents an ill-structured problem (King & Kitchener, 1994).

The seven stage model proposed by King and Kitchener is organized into three levels and summarized below:

Level One (Stages 1 – 3) - *Pre-Reflective Thinking* describes individuals who are

unlikely to perceive that there are problems for which a definite answer may not

exist. Knowledge is seen as fixed and there is no questioning of authority.

Level Two (Stages 4 – 5) – *Quasi-Reflective Thinking* sees individuals beginning to

realize that some problems exist with no definite solution. They start to relate

evidence to arguments, but evaluation of such is not present. Perspective emerges

although limited. It is at this level that most adults reside.

Level Three – *Reflective Thinking* involves an active construction of knowledge with

judgments made being open to debate. Authority is acknowledged, but also

critically analyzed. There is a high tolerance of ambiguity and recognition of

multiple perspectives.

After years of longitudinal studies with over 1,700 participants, reports suggest that

reflective judgment is a gradual evolution of intellectual development and critical thinking

(Reiman & Peace, 2004). Individuals at higher levels of reflective judgment are able to

better understand and appreciate human differences and adapt to the needs of others.

Summary

Three domains of judgment have been presented. The moral/ethical domain

developed by Kohlberg and later Rest and his associates represents how individuals think

about issues of fairness and social justice. Amounts of postconventional reasoning used in

ethical judgments can have a significant impact in educational settings such as discipline,

innovative instruction, and effective teaching. The ego domain works to describe one's

ability to interpret the views of others as well as be self-actualized. Loevinger's theory has

been described as the "executive" of the decision-making process. Work by Damasio

stressed the importance of emotion in such decision-making. Finally, conceptual judgment impacts interpersonal relationships. It distinguishes between those who prefer more concrete approaches to learning versus those who prefer to work in the abstract. Work by Rest and his associates (1999) on a four-component model may offer a means by which to integrate three fairly complex theories. Table 2.2 illustrates a possible new reconceptualization.

Table 2.2: A Five-Component Model of Disposition

Current Four-Component Model (Rest & Associates, 1999)	**Other Domains of Cognitive Development**	**Proposed Five-Component Model**
Moral Sensitivity	Conceptual	*Sensitivity*
Moral Judgment		*Judgment*
Moral Motivation	Ego	*Motivation*
Moral Character		*Action*
	Metacognition (Schrader, 1999)	*Reflection*

As seen in Table 2.2 a parallel exists between moral sensitivity and conceptual development as described by Hunt (1976). Sensitivity as described by Rest and his associates (1999) involves recognizing and interpreting multiple viewpoints in ill-structured situations similar to what Hunt referred to as "reading and flexing". Moral motivation necessitates a decision making process. Individuals must prioritize competing values or concerns then commit themselves to a course of action taking responsibility for proceeding outcomes. Loevinger (1976) called this the "executive", always working to reason about new situations in terms of existing schemas. Finally, Schrader's (1999) work offers a unique contribution to the model with her study metacognition. Through reflection on the other four components, individuals are made aware of the process of considering, deciding upon, and acting on ill-structured

events. It is this reflection that may allow for greater consistency between the components as well as allow for individual ownership of the process of development. The proposed five-component model will be further explored in Chapter Six as conclusions are drawn from the data and implications for future research and program development is suggested.

A description of a deliberate psychological and professional education program will now follow. The DPPE addresses the theoretical framework of dispositions through adult cognitive development and supports the second component of the definition: dispositions develop over time in deliberate professional education programs.

Deliberate Psychological and Professional Education: Developmental Clinical Assistance

From Past Development to Present Practice

A general history of clinical supervision can be traced back to the 1950s and continues in classrooms and colleges today although the implementation of *developmental clinical assistance* is more recent. The following is a brief overview of the theoretical framework of supervision upon which the DPPE used in this study was based.

Frustrated with the lack of in-class assistance teachers were receiving in the public schools, Morris Cogan (1973) began a fifteen year long study of how to improve the supervision of America's teachers. Defined as "the rationale and practice designed to improve the teacher's classroom performance," clinical supervision set forth to gather and analyze data on classroom events in hopes of improving student learning through improving the classroom behavior of the teacher (Cogan, 1972, p. 9). Through a series of stages known as cycles of assistance, a teacher and his or her supervisor or mentor work collaboratively to plan a lesson, conduct an observation, and analyze data gathered. The stages themselves,

described in chapter one of this text and reviewed in chapter three, require time and commitment from both parties. After viewing earlier forms of supervision, Cogan strongly felt that if the commitment was not there then the supervision should stop. "The rationale also dictates that clinical supervision is much better not done at all than done with inadequate support or with less-than-expert supervisors. Teachers are better left alone than simply tampered with" (p. 15). Cogan had developed a systematic program of supervision however, what he acknowledged was missing was a guiding theory for the practice.

Carl Glickman (1981), formerly a high school principal, took the idea of supervision and looked at it terms of the teacher as a learner. "What is known about learning, individual differences, and teachers leads to the strong premise that effective supervision must be based on matching orientations of supervision with the individual needs characteristics of teachers" (p. 40). Glickman theorized that changes in teachers could parallel changes in adult development. He cited work by Erickson, Levinson, and Loevinger on stages of adult development that are characterized by a movement from the self as the center to a universal principal of humanistic goals. Using various cases of actual teachers with whom Glickman had worked, he proposed a four-quadrant/two variable model of analyzing teacher behavior with the result being one of three supervision orientations: non-directive, collaborative, or directive. While this can involve a great many teachers, even Glickman himself indicated that a number of issues that teachers may present likely lie outside of the four-quadrant model. Combining the idea presented by Glickman, that effective supervision is based on the developmental needs of the teacher, with Cogan's system of clinical cycles of assistance has led to the emergence of developmental clinical assistance.

Reiman and Thies-Sprinthall (1998) used the term developmental instructional supervision (now termed "assistance") for their text which focused on an "in-class or in-school process for refining and expanding instructional repertoire that accounts for and differentiates between support and challenge according to the teachers' individual learning and developmental needs" (p. 6). Such a process came with the assumptions that the supervision was non-evaluative, the process required a significant amount of time to work effectively, and a balance between theory and practice was necessary. In this case the theoretical basis was adult cognitive development. Supervisors were responsible for the promotion of the cognitive growth of the teacher, application of a teaching/learning framework designed to support and challenge teachers, and an allowance of adaptation and generalization along with guided reflection. The supervisor should acknowledge and accommodate the needs of the teacher through "reading and flexing" as well as be a model for demonstration of various models of instruction (p. 177-178). Developmental clinical assistance, also termed instructional assistance, combined the cycles of assistance established by Cogan with a teaching/learning framework developed by Joyce and Showers (1995) and Sprinthall and Thies-Sprinthall (1983) known as the Integrated Learning Framework. The framework acknowledged two components for assisting teachers: Elements of Learning New Performances and Conditions for Adult Development. These two pieces have recently been merged into a more succinct theoretical framework of seven conditions for adult development (Reiman & Johnson, 2004):

> *Contextualized Learning and Development*: Recognition must be made of prior
> knowledge and learner experiences. It must also be acknowledged that all

learners are diverse in their background and needs. Building a rapport with

learners can be is a necessary component of development.

New Role-Taking (not role-playing): The learner needs to be actively engaged in a

complex new role or helping relationship. Inquiry and reflection that emerges

from interaction with real and immediate problems lend themselves to the most

significant gains in consciousness and interpersonal understanding.

Guided Inquiry: As a process of both analysis and meta-reflection, guided inquiry

can be quite intensive and should be monitored by a more capable other. Guided

inquiry can include performance assessment, dialogue journaling, and ongoing

discussion.

Balance: Cycles of action and reflection must remain in balance. Too little or too

much time between action and inquiry can result in frustration and a lack of

growth. In essence, this entails a complex new role or behavior sequenced with

guided inquiry each week.

Support and Challenge: The zone of proximal development as termed by Vygotsky

allows a more capable other to create an environment with a balance between

supporting the learner and providing optimal challenges. This condition is often

viewed as the most difficult of the conditions considering the engagement in a

new role alone can be challenging.

Reflective Coaching: An instructional model is necessary for describing how new

abilities are fostered in an adult learner. Coaching steps include assessment of

prior knowledge and performance, overview of related theory and evidence,

demonstration, opportunity for guided practice and feedback, and eventual

adaptation and generalization of the performance.

Continuity: Practice that is distributed over time is superior over that which is

massed. Cognitive growth and development requires continuous action and

reflection. This usually requires no less than four to six months.

An overview of three significant studies looking at this DPPE in general is presented

in the following section. Further studies connecting developmental clinical assistance to the

domains of moral/ethical, ego, and conceptual judgment and action will be integrated as

research in the domains is presented.

Developmental Clinical Assistance: Supporting Studies

Corrigan and Griswold (1963) examined the effects of student teachers development

in the recognition of learner purpose, engaging the learner in problem solving, and assisting

the learner to develop generalizations. An inventory addressing these three principles along

with an interview was administered to 63 preservice teachers at one of two New York

universities before and after their student teaching semester. Interviews were held with a

third of the participating student teachers to assess perceived causes of change in thought

processes. A mean change of plus 9.8 points with an effect size of + 0.40 resulted from the

pre and post inventory. During the interview sessions it was discovered that one of the main

reasons thoughts on the three topic areas changed was because of the college supervisor and

direct experience. The significance of the study is that supervision can change a teacher if a

goal of providing experience and opportunity for guided reflection is made a priority.

The type of interaction of the college supervisor was studied further by Reavis (1975)

through a method of comparing the effects of traditional and clinical supervisory patterns on

supervisor – teacher interaction. Each of nine supervisors in the study was assigned two

teachers: one to mentor in a traditional sense and one to supervise in a clinical pattern. Since

the supervisors had been trained in both patterns of supervision, it has to be maintained that a

certain amount of bias towards the clinical approach may have affected the outcome of the

study. The teaching behaviors targeted by the supervisors were the same for each group.

One of the goals of the study was to discover if significant differences in verbal interactions

of the supervisory teacher in a traditional versus clinical approach were present in a post-

conference situation. The teachers were unaware of the study and the supervisors were

informed the study was looking into a comparison between traditional and clinical

supervision in relation to changing teacher classroom performance. The interaction was

assessed using a Blumberg interaction analysis (adapted from the Flanders Interaction

Analysis) and scored by trained raters with a ninety percent interrater reliability. Significant

differences in interaction were found at the level of supervisors accepting or using teacher

ideas in their verbal behavior. Using an ANOVA, the difference in the means of the two

groups was 6.280 with a p-value of 0.028 and an effect size of + 0.33. Where this is the

minimal effect size held by most researchers as significant, it does warrant further research in

the interaction of teachers and supervisors in clinical methods (Bowen, 1977). The teachers

in the study were also asked to rate (on a scale of 1-7) the type of supervision they received

and the impact on themselves considering categories of helpfulness, communication,

conferences, observations, suggestions, and self-perception. A significant difference was

found between the two groups in reference to communication (effect size equaling +0.98

with a p-value of 0.05) and teacher self-perception (effect size equaling +0.66 with a p-value

of 0.05). Through these two studies, a difference in interaction and impact on support for

teacher development was found. However, further research is necessary to integrate the use of clinical assistance with the underlying theory of adult cognitive development.

The most recent study promoting development through the DPPE is by Reiman and Johnson (2004). In a meta-analysis, the authors summarized the entire population of research studies using the DPPE as an independent variable from the years 1972 – 2001. Dependent measures included those that assessed judgment (in the moral/ethical, conceptual, and ego domains) in various phases of the teaching profession (preservice, induction, continuing professional development). Table 2.3 shows the results of the data in terms of the effect size of gains in development:

Table 2.3: Effect Size Gains in Development as a Result of a DPPE

Moral/Ethical Judgment	Ego Judgment	Conceptual Judgment
+.75	+.59	+.50

These affect sizes represent a moderate to large change in judgment. Implications of this study support the use of DPPE as a "promising theoretical and conceptual model of intervention for teacher education and teacher professional development programs" (p. 15). Significant changes in moral/ethical, ego, and conceptual judgment were apparent resulting in teachers being more reflective about their work and their students. The studies in this meta-analysis will be reviewed further as they apply to the theories of adult development.

Available research connecting development in dispositions through the DPPE will now be presented followed by studies making a link between professional judgment and profession actions.

Fostering Professional Judgment through DPPE

Several studies have sought to make a connection between the DPPE described and dispositional development in terms of the constructs of moral/ethical judgment, ego judgment, and conceptual judgment. These studies will be reviewed based upon their findings and implications for future research including the present study.

Preservice Teacher Education

A number of researchers have examined the link between professional judgments and the DPPE framework presented in Appendix B. Glassberg (1977) used a sample of undergraduate English education majors to test the difference in attending a seminar focused on developing cognitive constructs in the moral/ethical and ego domains versus a traditional seminar. A non-equivalent pretest-posttest group design was used to test for significant change in moral/ethical and ego judgment based on results of the DIT and the SCT, respectively. Results indicated a significant change at the .05 level in moral/ethical development for the experimental group as measured by the DIT with scores rising from 34.61 to 37.17 (on a scale of 0 – 95). In reference to ego development, which spans ten stages, those in the experimental group went from a mean of 6.63 (Self Aware Stage) to a 7.34 (Conscientious Stage) with significance of .001. This study supported the use of a cognitive-developmental focus for preservice teacher education. Another implication was that some students (those pre-testing at lower levels) did not show measurable change on the DIT and SCT. This implied a closer look at differentiation based upon developmental level. To what extent do individuals existing in various stages of cognition react to the DPPE intervention?

In 1993, Reiman and Parramore designed a study to measure the change in judgment in undergraduate student teachers after being involved in the intervention of extended field experience with a special focus on guided reflection integrated with a new role of tutoring. Experimental and comparison groups were used (13 subjects in each) and paired based upon pretest scores on the DIT. Findings indicate a significant increase for the experimental group at the .05 level in moral/ethical development. With a mean gain score of 56.94 (on a scale of 0-95) for the experimental group and 46.4 for the comparison group, an effect size of +.93 was yielded. Although there was also an increase in conceptual judgment, 1.64 to 1.94, on a scale of 1.0 – 3.0, it was not statistically significant considering both the experimental and control group saw similar increases. Again, implications of the study supported "careful attention to those theories and constructs that hold promise as guiding frameworks for the practice of teacher education" (p. 119). The authors maintain cognitive-developmental theory combined with analysis and reflection has significant potential for promoting psychological change.

Riggsbee (1995) found similar results after studying groups of student teachers involved in a reflective seminar. Using a non-equivalent control group design, Riggsbee administered a pretest and posttest to an experimental group of 12 student teachers at a private university and a control group of 12 students at a public university. The intervention involved the experimental group participating in a seminar stressing reflectivity and guided analysis. After analyzing the two groups for differences in their posttest scores, results at the .10 level revealed a difference in conceptual judgment. Although not accepted by more recent standards of significance, the results are notable. Specifically, the experimental group moved from 1.73 to 1.85 while the control group change measured 1.71 to 1.74. Although

the DIT was also administered, no significant difference was measured between the two groups. Professional judgments were also examined using journal entries with an emerging theme of movement from concern for self to a concern for teaching and finally a concern for the pupils. As with other studies, the use of a cognitive developmental framework for teacher education is supported by Riggsbee. She also noted the need for research looking at how the developmental level of the cooperating teacher could impact the development of the student teacher.

Last, Watson and Reiman (2001) investigated the effects of a developmental intervention (with a large emphasis on role taking opportunities) used with undergraduate education majors in a one semester Introduction to Teaching class. The experimental group consisted of 19 undergraduates at one university while the control group (N=20) was from a different university. Using the Paragraph Completion Method, results indicated a difference (p < .10) in the posttest scores between groups in conceptual judgment (experimental group at 1.94 and the comparison group at 1.74) with an effect size of +.63. In reference to moral/ethical reasoning, the experimental group rose from 31.93 to 43.33 percent of principled reasoning as measured by the DIT. There was a significant difference in this gain versus the control group resulting in an effect size of +.62. Qualitative analysis was conducted on journal entries and sample teaching tapes for the experimental group. Using a method of constant comparison, the authors discovered the following themes:

Evolution in understanding the complex process of teaching and learning.

Interaction in the dynamic public school milieu.

An investigation of personal convictions regarding the profession of teaching (p. 39).

A shift from a concern about self to a concern about student learning was also apparent. Implications include the use of cognitive developmental theory to shape teacher education programs in hopes of promoting learning and development of preservice teachers. The authors also note the importance of differentiation of support and challenge based upon the individual needs apparent from analysis and reflection.

Induction Phase (First Three Years of Teaching)

Reiman and Watson (1999) conducted a study with the objective of discovering change in beginning teacher effectiveness and conceptual and moral judgment as a result of the behaviors of their mentors. Subjects for the study included 19 randomly selected beginning teachers from various schools who were assigned to either an experimental group (nine teachers) or a control group (ten teachers). The experimental group of teachers was assigned a mentor who had received rigorous training in mentoring and coaching. Although the comparison group was assigned teachers not involved in the training, the mentors did have experience and were involved in four support sessions addressing concerns of the profession. Results were analyzed in light of the experimental group only and consisted of assessing the beginning teacher cognitive growth through the DIT for moral/ethical judgment and the PCM for conceptual judgment. A Flanders Interaction Analysis measured effectiveness of the beginning teacher's classroom interactions. Finally, patterns of retention for the beginning teachers were determined. Since teacher effectiveness is considered a professional action, this component of the study will be discussed in the following section. In reference to moral/ethical development, posttest results on the DIT represent a gain score from 32.84 to 40.00 with an effect size of +.82. While this growth is considered somewhat limited (interventions occurring over a year indicate gains of 8.00 – 10.00 points) the

presence of statistically significant growth ($p < .01$) is apparent. Significant ($p < .01$) gains

in conceptual development of 0.35 were also reported with an effect size of +1.12, indicating

an increase in "conceptual complexity and interpersonal maturity" (p. 61). The results of the

study hold high implication for research in developmental clinical assistance. Various means

of measuring teacher effectiveness in the classroom (via qualitative and quantitative means)

combined with the measurements of cognitive growth through developmental clinical

assistance are needed.

Continuing Professional Development

Finally, studies on the continuing professional development of teachers, often a

forgotten realm in research, have produced significant findings in terms of teacher

dispositions and the impact their dispositions may have on others. In 1988 Reiman designed

a study examining the developmental change in teachers studying to become mentors. Using

an experimental and control group of equal sizes (N=20), Reiman looked at change in

conceptual judgment and moral/ethical judgment as well as various qualitative components

such as interviews, journal entries, and course evaluations. After a six-month intervention

that involved differentiating responses to subject's journals from the experimental group,

Reiman found a strong increase in conceptual judgment (1.78 – 1.96). Although this was not

statistically significant, an effect size of +.22 notes a modest increase. Increases in

moral/ethical judgment were found approaching statistical significance at the .10 level with

the experimental group rising from a score of 41.21 to a 48.00 with an effect size of +.37.

Examination of the qualitative components showed two strong themes: an increase in

perspective taking as the intervention progressed and an evolution of ability to be multi-

focused on the needs and behaviors of students and other colleagues. Implications of

Reiman's study included continued investigation of the relationship between mentor developmental level including professional judgment and action and the teaching practices and well-being of their mentees. Additional studies using both quantitative and qualitative data would be useful in achieving these goals.

Parker (1994) looked at staff development grounded in a developmental framework for middle school assistance teams. Using a nonequivalent pretest-posttest design, Parker tested for change in conceptual and moral/ethical judgment following the use of the DPPE for an experimental group of ten participants. The comparison group consisted of six team members from a nearby county not involved in any intervention. Results showed a difference approaching statistical significance in mean gain score of conceptual development of the experimental versus the comparison group (1.96 as compared to 1.68) at the .10 level with an effect size of +.75. Scores for moral/ethical development resulted in a mean gain score of 45.67 for the experimental group while the comparison group only showed a mean gain score of 30.70. The result, while not significant resulted in an effect size of +1.52. Although Parker's study held implications similar to others in promoting the use of cognitive developmental theory into various realms of the teacher profession, he stressed the need for further study of the implication on students with learning and behavior challenges.

In order to study the effects of an inservice teacher education program using the DPPE, Oja (1978) administered the DIT, PCM, and the SCT to both experimental and comparison groups of inservice elementary and secondary teachers and support personnel. Results indicated a significant increase in all three domains for the experimental groups involved in the intervention. Moral/ethical judgment in terms of principled moral reasoning yielded mean gains scores of 63.1 for the experimental group and 51.5 for the comparison

group (effect size of + .85, p<.02). Conceptual judgment resulted in 2.01 (experimental

group) and 1.78 (comparison group) (effect size of + 0.69, p<.01). Ego judgment for the

experimental group saw a mean gain score of 6.9 while the comparison group was at 6.56

(effect size of + .41). Although this increase was not statistically significant, the effect size

was moderate. Oja's research held implication for the refining developmental theory in

professional development settings as well as developing systematic guidelines to analyze

various data including that from journals, observation tapes, etc. In general, the study

supported teacher development in terms of structural change as well as change in

performance however, continued research is needed to make such connections.

Linking Professional Judgment and Professional Action

Is there a correlation between professional judgment and professional action? Several

studies have attempted to answer that question by making connections between judgment and

action with promising results. However, there continues to be a lack of empirical evidence to

support the component of dispositions as trends in professional actions. Past and current

studies are discussed in reference to this component as it relates to professional judgment

followed by the implications that have led to the design of this research study.

The Moral/Ethical Domain

In an extensive review of over 75 studies using the DIT, Blasi (1980) discovered that

about half of the studies reported significant correlations between scores on measures of

moral judgment/reasoning and behavior. The studies used included some measure of moral

reasoning, a behavior measure relating the behavior to moral reasoning, and was not limited

to published material (i.e., included unpublished dissertations and technical reports). The

analysis was separated into five strands. Each strand is described below along with the

results regarding impact on behavior. Having an impact on behavior was viewed in terms of support for the hypothesis that there is a positive correlation between judgment and behavior. Two other results were possible: lack of support for the hypothesis and results that were either too ambiguous to interpret or not related to the hypothesis.

Moral reasoning and delinquency – Eight out of 13 studies support the hypothesis that a correlation exists between moral reasoning and behavior among delinquents.

Moral reasoning and real-life behavior – Six of 12 studies support the hypothesis that a correlation exists between moral reasoning and real life behaviors such as sexual experiences, socioeconomic factors, and teacher ratings (fairness, sensitivity, friendliness).

Moral reasoning and honesty – Seven out of 17 studies support the hypothesis that a correlation exists between moral reasoning and honesty (all studies included the common characteristic of having an incentive to cheat and the impression that it is safe to cheat).

Moral reasoning and altruistic behavior – Ten of 18 studies support the hypothesis that a correlation exists between moral reasoning and altruistic behavior such as sharing, commitment, or helping/volunteering.

Moral reasoning and resistance to conformity – Six of 11 studies support the hypothesis that a correlation exists between moral reasoning and resistance to conformity.

The results of Blasi's study provide some support for the hypothesis that moral judgment/reasoning and moral behavior are correlated. However, as Blasi warns, "different behaviors were assessed and different units of analysis used…Empirical support, in fact,

varies from area to area" (p. 20 and 37). Further research is needed designed specifically for the context being studied. More recent studies have sought to do just that.

In a summary of the research on moral judgment in teachers Chang (1994) found those at a higher level of moral reasoning held more "humanistic-democratic view of student discipline" and were able to consider different viewpoints, held more tolerance for student disturbances, and stressed student understanding of the purpose of rules (p. 73). Perception of their role as a teacher was also a variable related to moral reasoning. Those at higher levels were able to better recognize students' needs and feelings, build and maintain positive relationships with students, and were characterized as more cheerful and friendly. Finally, teachers at higher levels of moral reasoning understood the concepts of "individualized instruction" and "on task" behavior in terms of individual children and their contextual characteristics. Chang states, "Teachers with higher moral reasoning can be more empowering to student learning and healthy social development" (p. 81). One study by Johnston and Lubromov (1987) utilized case study methodology discovering that teachers at more principled levels of moral reasoning (as measured by the DIT) were more apt to be democratic in their methods of discipline (involved students in rule making and promoting understanding of the reason for the rules). Eight elementary teachers were identified based upon their extreme scores on moral reasoning. Those teachers with lower moral reasoning considered rules and procedures in terms of maintaining social order. Teachers with higher moral reasoning considered rules necessary to protect the rights of students and encouraged students to discuss various aspects of developing, maintaining, and changing rules and consequences. Based mainly on teacher judgments regarding rules, this research implies a connection between approaches to and actions taken regarding discipline.

Arlin (1993) published a study describing the process of becoming a teacher. The focus of the article was the results of questionnaires given through the semester to both student teachers and their supervisors addressing general constructs of teaching ("What is your definition or teaching?") to questions describing incidents of ill-structured problems (relating to moral/ethical development) that arose in the classroom (p. 344). The questions were arranged purposefully in an attempt to discover how a teacher's formulation of problems and solutions progressed throughout the semester. Six levels of problem formulation were discovered through the study,

1. There is no problem; no thought appears to be given.

2. The problem and solution are not separable.

3. The problem is stated and it has a single, specific definition and a single, clearly identifiable solution.

4. The problem has single or multiple definitions and a single, clear identifiable solution.

5. The problem has single or multiple definitions and multiple solutions.

6. The problem can have one or more definitions and any given method of solution can only be adopted through a process of interaction/assessment/finding a balance (p. 346-347).

The level at which a student teacher engages in problem formulation relates to the relative expertise of his/her teaching. These levels of problem formulation can be seen as highly cognitive in nature with relationships towards taking multiple perspectives, analyzing various frames of reference, and reflective judgment. In her conclusion Arlin states, "The more adequately the student teacher formulates the instructional problem and is able to take

the student's point of view, the sooner the teacher will move toward wisdom and expertise" (p. 347).

In a study by MacCullum (1993), 24 high school teachers were tested on the Defining Issues Test and interviewed about various discipline issues. During the study, participants were tested two times using the DIT during which time they attended staff development focused on a cognitive-developmental approach to reconceptualizing teachers' roles in discipline situations. Repeated measures analysis of variance (2 – moral group x 4 – story) was used to determine teacher response to hypothetical discipline incidents. The group mean on the DIT was 39.5 (SD = 19.55 with a range from 3.3 to 76.7). Participants in the higher range of principled reasoning (over 46) approached three out of the four dilemmas presented during the interviews from more varied perspectives, viewed their role as more facilitative, and provided more information/rationale (the fourth involved fighting which most thought should be handled by someone such as an administrator). A major implication of the study was to explore further including the variation that can exist in the interpretations by student or beginning teachers of information presented to them based upon moral judgment level. Presentation of such material can also vary depending upon the moral judgment level of the cooperating or mentor teacher. Further research should also include observing teacher actions in the classroom and matching or mismatching them to the judgments made in the interviews.

A final study conducted by Reiman and Peace (2002) included a sample of eight teachers in an experimental group and five teachers in a control group. The teachers were from the same district and were in leadership roles for their respective schools. Those in the experimental group were trained in peer-coaching methods using the framework of social

role-taking and guided analysis and reflection (along with other components of the conditions for adult development). Control group participants attended monthly meetings with no professional development framework established. Results indicate a significant ($p = .001$) increase in moral/ethical development for the experimental group of 9.5% (effect size = +3.0) with the control group showing no increase. A connection to professional action is made by studying the use of listening behavior by the participants with those they were coaching. Using a Flanders Interaction Analysis System Adapted for Supervision, participants in the experimental group showed an increase approaching statistical significance in listening skills ($p = .10$). Trends in a shifting concern for self to concern for the learners was also apparent from the qualitative analysis. Implications from this study include continued use of the developmental framework across the teacher career span, continued research in the link between professional knowledge, performance, and development, and refinement of measurement instruments that support forms of practice that lead to more ethical and expert teaching and mentoring.

The Conceptual Domain

In 1981, Alan Miller conducted a review of over 60 studies of teacher development in the conceptual/reflective domain. He discovered that teachers who engaged more complex judgments had a greater ability to adapt to the needs of students and consider the perspective of the students in terms of classroom work. Making a connection between cognition and behavior, Miller summarized that subjects engaging in higher conceptual reasoning versus those using lower levels showed the following behaviors:

1. More prejudice reduction;
2. More empathy;

3. More internal locus of control;

4. Longer decision latencies;

5. Greater use of nondirective styles and autonomy;

6. More interdependent styles; and

7. Superior communication and information processing skills (p. 64).

Hunt (1976) studied the ability of teachers to vary their teaching style and adapt to the needs presented by students. Termed "reading and flexing," Hunt described the relationship between the student and the teacher as one where the "effects of the student pull, or the influence of students on teachers" elicits a behavioral response from a teacher which taken in its entirety can be a measure of a teacher's adaptability (p. 269). In a summary of studies, Hunt presented the idea of student pull in various conditions. For example, the student characteristic (or pull) of appropriate or inappropriate behavior can result in a teacher behavior of willingness to clarify actions necessary for appropriate behavior versus more directions and criticism towards the student displaying inappropriate behavior. Hunt was able to observe the act of teachers responding to student pulls by placing trainees in situations where they were teaching and encountered an obstacle posed by a student. The trainee was then evaluated on an Adaptability Index. After witnessing interactions from over a hundred trainees, Hunt surmised that adaptation deemed successful emerged from teachers who were able to *read* the students' pull by displaying an understanding of the information being presented, then *flex* their own behavior to encourage contemplation of the action or guide the student to think further, find a more appropriate answer, or change behavior. Further research in this area is needed as well as in teacher education programs that recognize the idea that teachers' dispositions can have an effect on classroom environments.

Hunt's influence continued in a study by McKibbin and Joyce (1981) who conducted longitudinal research focusing on the relationship between teacher psychological states (conceptual judgment) and teacher performance. After pre-testing twenty teachers then presenting them (among other staff members within the same county) with various staff development opportunities for four consecutive years, McKibbin and Joyce returned to assess the generalization of the techniques learned. How and to what extent were the teachers using them in actual practice? Those teachers at higher developmental stages described as having "an orientation toward self-actualization," "reaching beyond the present conceptions of their roles," and having "enough sense of personal security in their present role that they can challenge the present order of things" were more apt to be employing the innovative methods learned during the workshops (p. 251). Those functioning at lower levels described as persons with an orientation concerned with economic security and basic needs were only able to implement methods that were simple and concrete. The implications of these findings for the professional development of teachers relates to the Matching Model proposed by Hunt. Providing both support and challenge at an optimal level (dependent upon the developmental level of the teacher) may produce more lasting effects on classroom instruction.

Thies-Sprinthall (1980) examined the relationship between a student teacher and his/her classroom supervisor and the impact the supervisor's developmental level had on the student teacher. Using a sample of 29 pairs of student and supervising teachers, four groups were formed as shown in Table 2.4.

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Table 2.4: Group Design Based Upon Conceptual and Moral/Ethical Judgment

	Group1	Group 2	Group 3	Group 4
Level of Conceptual and Moral/Ethical Judgment	Student Teachers: HIGH	Student Teachers: LOW	Student Teachers: HIGH	Student Teachers: LOW
	Supervising Teachers: HIGH	Supervising Teachers: HIGH	Supervising Teachers: LOW	Supervising Teachers: LOW
Number of pairs	5	4	11	9

Purposeful sampling was used taking the top and bottom 20% of undergraduates based upon their conceptual level then using the supervisors to whom they were assigned. Three dependent variables were measured: a subjective supervisor rating scale, an objective Flanders Interaction Analysis, and student teacher grade point average. In reference to initial differences, student teachers higher in conceptual and moral judgment were more flexible and responsive than those with lower judgment as measured by the Flanders. Further, no difference in grade point average was found between high and low judgment subjects. In order to answer the proposed question, Thies-Sprinthall analyzed existing differences between the supervisor rating scale and the Flanders. Group three (high student teacher judgment, low supervising teacher judgment) showed particularly interesting results. The student teachers scored well on the Flanders indicating more open and responsive teaching behaviors yet were rated as average or below average by their supervising teachers. Group four (low student and supervising teachers) resulted in student teachers being rated as average by their supervisors however the student teachers scored low on Flanders indicating a more directive (i.e., lecturing) style of teaching. Finally, group one had congruence between the subjective supervisor rating and the score received by the student teacher on the

Flanders. Implications of this study are highly significant in terms of studying Hunt's Matching Model in situations of mentoring and supervision. "Supervisors clearly need a complex conceptual system as a basis for selecting appropriate learning experiences for beginning teachers" (p. 20). If these supervisors do not have the appropriate developmental systems needed for effective mentoring, preservice and beginning teachers may find themselves in a miseducative situation.

In a study discussed in the previous section, Reiman and Watson (1999) considered the effects of supervisory behavior on the judgments and actions of beginning teachers. Their results indicated a significant growth in professional judgment as measured by the DIT and the PCM. In regards to teacher effectiveness, the Flanders Interaction Analysis showed an increase in the percentage of direct instruction (i.e. lecturing, directing, etc.) used by the beginning teachers. However, this was accompanied by an increase in student talk versus teacher talk. According to the authors this may indicate a need of control increasing throughout the school year for beginning teachers. Further investigation into the conferencing style of supervisors showed a dramatic decrease in direct conferencing, which resulted in a pattern of a more learner-centered approach for coaching the mentee. This, coupled with the increased amount of beginning teacher talk, allowed for a model of supervision developmental in nature and characteristic of collaboration. This study pioneers analysis of how and to what extent mentor developmental level impacts beginning teachers and makes a connection between professional judgments and professional actions.

The Ego Domain

In 1989, Oja and Smulyan published a study based on a collaborative action research project entitled ARCS (Action Research on Change in Schools). Although the text focused

mainly on the action research process itself, a theoretical framework of adult cognitive development was established. Teachers' thinking and behavior was then examined in such a context, with implications for the study at hand. As the authors explained, "A teacher's cognitive-developmental stage perspective defines a context or meaning system through which he or she interprets and acts on issues related to the school environment" (p. 138). Five participants were selected as a representation of various developmental stages that may exist within a group. The ego judgment levels spanned from a stage 3 to a stage 4/5. Conceptual level was also examined by the PCM and measured 1.8 – 2.2. Finally moral/ethical reasoning was assessed and ranged from 32% postconventional reasoning on the DIT to a 75%. Patterns of behavior were then examined for each participant and related back to their developmental level. Qualitative data showed several matches between the behavior of individual teachers and their psychological measurements within the contexts of the action research team. For example, Jack, at the conformist stage of development approached problem solving in simplistic ways. He was more concerned with issues of authority and worked to minimize controversy. George, on the other hand, scored at the individualistic stage of ego development and viewed the action research project as a means by which to "address the way teachers felt about decision making and their involvement in school processes" (p. 130). Implications included use of the cognitive developmental framework in various facets of the teaching profession. Connections are also made between teacher professional judgments and professional actions.

Table 2.5 summarizes the available studies connecting teacher professional judgments and actions to adult cognitive development. The studies support the use of cognitive developmental theory in three facets of teacher education: preservice/teacher education,

induction (first three years of teaching), and continuing professional development).
Implications from the research suggest further study in four areas:

1. The use of a cognitive-developmental framework to guide teacher education and
    teacher professional development.

2. Linking professional judgments to professional actions in various contexts of
    teacher development (preservice, induction, and continuing practice).

3. Further examination as to how individual levels of judgment affect the way in
    which adults interpret and act upon ill-structured problems. This implies perhaps
    the need to differentiate the support and challenge presented on an individual
    basis.

4. Continued research in to how the developmental level of a mentor/cooperating
    teacher can impact his or her mentee/student teacher as well as how the
    developmental level of a teacher impacts his or her students.

5. Establishment of specific instruments and systematic guidelines for measuring
    professional actions.

**Table 2.5: Summary of Research Linking Professional Judgment and Professional
Action**

Study	Context of Study	Results	Implications
Glassberg (1977)	"Peer Supervision" curriculum based upon cognitive-developmental constructs with undergraduate English education majors.	• Significant change in level of ego judgment • Significant change in level of moral/ethical judgment	• Supports use of cognitive-developmental theory as a framework for teacher education • Differentiated instruction based upon developmental level.
Reiman & Parramore (1993)	Investigation into the effects of extended field experience for student teachers with a focus of guided reflection.	• Significant change in level of moral/ethical judgment • Increase in conceptual judgment although not significant	• Supports use of cognitive-developmental theory as a framework for teacher education

Table 2.5 (continued)

Riggsbee (1995)	Undergraduate education majors participating in a seminar focusing on reflectivity and guided analysis.	• Significant change in level of conceptual judgment • Journal entries show a change in concern for self and teaching to a concern for pupils	• Supports use of cognitive-developmental theory as a framework for teacher education • Further research should include impact of the developmental level of cooperating teacher/mentor on student teachers or mentees • Use of qualitative data to describe judgment
Watson & Reiman (2001)	Introduction to Teaching class for undergraduates with a developmental intervention focusing on role-taking opportunities.	• Significant change in level of moral/ethical judgment • Significant change in level of conceptual judgment • Qualitative data shows better understanding of teaching process and increased self-analysis	• Supports use of cognitive-developmental theory as a framework for teacher education • Differentiation of support and challenge based upon individual developmental needs
Reiman & Watson (1999)	Change in beginning teacher judgment levels and effectiveness as a result of mentor behavior. Mentors were involved in intervention based on addressing the cognitive developmental needs of beginning teachers.	• Significant change in level of moral/ethical judgment • Significant change in level of conceptual judgment • Beginning teacher behaviors became more teacher directed in instruction and allowed for more student talk. • Mentor teachers decreased use of directed conferencing allowing for more mentee talk	• Supports use of cognitive-developmental theory as a framework for teacher education • Proposes a means of measuring mentor and beginning teacher behavior • Relationship may exist between mentor behaviors and beginning teacher development
Reiman (1988)	Effects of differentiated responses based on cognitive-developmental theory to experienced teachers wanting to become mentors.	• Significant change in level of moral/ethical judgment • Strong increase in level of conceptual judgment although not statistically significant • Qualitative data shows increase in perspective taking and an evolution to multi-focus on colleagues and students	• Supports use of cognitive-developmental theory as a framework for teacher education • Continued examination of relationship between mentor professional judgment and actions to teaching practices and influence on mentee • Combined use of qualitative and quantitative data to gather information on judgments and actions
Parker (1994)	Using cognitive developmental framework for staff development of middle school assistance teams who work in evaluating students with special needs.	• Significant change in level of moral/ethical judgment • Strong increase in level of conceptual judgment although not statistically significant	• Supports use of cognitive-developmental theory as a framework for teacher education • Use of framework in various settings of the teaching profession • How developmental level of teachers can affect students with learning and behavioral challenges

Table 2.5 (continued)

Oja (1978)	Use of developmental framework for inservice teacher education.	• Significant change in level of moral/ethical judgment • Significant change in level of conceptual judgment • Increase in ego judgment although not statistically significant	• Supports use of cognitive-developmental theory as a framework for teacher education (with refinements) • Develop systematic guidelines to use with analyzing journals, teaching tapes, etc. • Continued research in making connections between cognitive structures and performance
Blasi (1980)	Review of over 75 studies examining connections between moral/ethical development and behavior.	• Over half the studies report a correlation between moral/ethical judgment and behavior	• Supports link between professional judgment and professional action • Research as context specific
Johnston & Lubromov (1987)	Case study methodology used to examine connections between teacher principled reasoning and behavior.	• Teachers at higher moral reasoning viewed rules necessary to protect student rights • Teachers at lower moral reasoning viewed rules as useful in maintaining order	• Connection exists between moral/ethical judgment and behavior
MacCullum (1993)	Teachers interviewed with scenarios regarding approach to discipline before and after staff development using DPPE.	• Teachers at higher levels of moral reasoning approached problems with more perspective and viewed role as more facilitative	• Differences exist in how individuals interpret ill-structured problems based upon developmental level • Further research in linking teacher judgment to actual behavior in the classroom
Reiman & Peace (2002)	Teachers in leadership roles trained in peer coaching methods using social role-taking and guided analysis and reflection.	• Significant change in level of moral/ethical judgment • Increase in listening skills (measured by the Flanders Interaction Analysis) • Shift in concern for self to concern for learners	• Supports use of cognitive-developmental theory as a framework for teacher education across career span • Continued research in the link between professional knowledge, performance, and development • Refinement of measurement instruments for teacher action
Miller (1981)	Review of over 60 studies examining connection between teacher conceptual development and behavior.	• Teachers at higher levels of conceptual reasoning have greater ability to adapt to the needs and consider the perspective of students	• Continued research in linking professional judgments and professional actions in specific contexts
Hunt (1976)	Summary of studies in which teachers were presented with student "pulls".	• Adaptation to students emerged from teachers who were able to appropriately "read and flex" to student pulls	• Further research to make connections between professional judgment and professional action • Continued study in how teacher behavior affects the classroom environment
McKibbin & Joyce (1981)	Measured generalizations of practice of various techniques presented in staff development situations over four years.	• Those at higher developmental levels integrated innovative methods into teaching • Those at lower developmental levels used only those described as "simple and concrete"	• Use of Hunt's Matching Model for staff development situations

Table 2.5 (continued)

Thies-Sprinthall (1980)	Effectiveness or Ineffectiveness of cooperating teacher developmental level on relationship with student teacher.	• Situations of mismatch (cooperating teacher at low developmental level/student teacher at high developmental level) resulted in average or below average rating with behavior analysis (Flanders) indicated effective teaching patterns	• Continued study in the impact of cooperating teacher/mentor developmental level on the growth of the student teacher/mentee • Use of Hunt's Matching Model in situations of supervision or mentoring
Oja & Smulyan (1989)	Use of cognitive developmental theory as a framework for a collaborative action research project. Five subjects were studied in relation to participation in action research in relation to developmental level.	• Matches found between teacher's moral/ethical, conceptual, and ego level and their behavior within the context of action research	• Supports use of cognitive-developmental theory as a framework for teacher education across career span • Use of cognitive measurements to predict behavior

Summary

As the complexity of teaching increases, the means by which we educate and design professional development for teachers also becomes increasingly intricate. Today's teacher must be equipped with the knowledge, skills, and dispositions necessary for all children to learn (NCATE, 2002). Teacher education is in the midst of opportunity to restructure programs. Using a definition of dispositions that is both concise and grounded in a theoretical framework is crucial.

A definition for dispositions was presented based upon historical scholars and current conceptualizations. Considering the definition posed was based in theories of adult cognitive development, three specific domains were reviewed: moral/ethical judgment, conceptual/reflective judgment, and ego judgment. This was followed by a description of developmental clinical assistance as a means of fostering effective dispositions by addressing growth in the three judgment domains. An adaptation of Rest's four-component model was suggested as a possible integration of the domains combined with Schrader's theory of metacognition. The five-component model: sensitivity, judgment, motivation, action, and

reflection, will be future examined in light of data that is gathered through the case study. Finally, studies connecting clinical assistance with these domains were presented along with studies that have indicated results linking professional judgment and professional action. A summation of the studies was presented in light of implications leading to the current research project. In the following section exploratory and descriptive case study methodology is proposed as a means by which to examine the convergence between theoretical and observed patterns of professional judgment and congruence between such judgment and action.

CHAPTER 3 – RESEARCH DESIGN

Introduction

In the previous chapter five implications for future research were generated from a review of literature in two realms, connecting dispositions with the DPPE of developmental clinical assistance and making a link between professional judgment and professional action. These five implications guided the establishment of two main research questions and an appropriate research methodology. Implications include:

Support for the use of a cognitive-developmental framework to foster effective professional judgments.

Need for research designed to discover links between professional judgments and professional actions in various contexts of teacher development (preservice, induction, and continuing practice).

Need for further examination as to how individual levels of judgment affect the way in which adults interpret and act upon ill-structured problems in the context of mentoring and teaching. This implies perhaps the need to differentiate on an individual basis the support and challenge presented.

Need for continued research in how the developmental level of a mentor/cooperating teacher can impact his or her mentee/student teacher as well as how the developmental level of a teacher impacts his or her students.

Need for exploration of specific instruments and systematic guidelines for measuring professional actions.

How and by what means can one effectively address these implications? This chapter introduces the case study design as an effective means used to answer the research questions

that have emerged and provide a bridge connecting the theory and practice of dispositional study. It is organized into sections including an overview of the research questions, an in-depth look at the case study design as a scientific methodology, description of participants and setting (including selection process), and discussion of validity and reliability in terms of the research approach.

Research Questions

Two main questions have been identified through the preceding review of available research. These two questions are further expounded by four subquestions.

How does the professional judgment of mentor teachers correspond to their professional action as they assist in beginning teacher development?

How does the level of moral/ethical judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

How does the level of conceptual judgment in mentor teachers correspond with their professional action as they assist in beginning teacher development?

How does the level of ego judgment in mentor teachers correspond to their professional action as they assist in beginning teacher development?

How do these professional judgments and actions influence interactions with the beginning teachers?

How does the professional judgment of beginning teachers correspond to their professional action as they address the needs of diverse learners?

How does the level of moral/ethical judgment in beginning teachers correspond to their professional action as they address the needs of diverse learners?

How does the level of conceptual judgment in beginning teachers correspond to their

professional action as they address the needs of diverse learners?

How does the level of ego judgment in beginning teachers correspond to their

professional action as they address the needs of diverse learners?

How do these professional judgments and actions influence interactions with diverse

learners?

Statement of Purpose

The purpose of this study was to discover if a link between professional judgments

and professional actions exists and to consider the impact that such judgments and actions

have on others in the context of mentoring and teaching. The need for the research comes

from the recent attention given to "dispositions" in the field of education.   Currently the term

disposition is unclear to many professionals in education. However, a definition has emerged

which is both concise and theoretically based. Professional disposition is defined as an

attributed characteristic of a teacher that represents a trend of a teacher's judgments and

actions in ill-structured contexts. Further, it is assumed that these dispositions, trends in

teacher judgments and actions, develop over time in deliberate professional education

programs (Reiman & Johnson, 2004). This definition was explored based upon implications

of research reviewed in Chapter Two examining a link between fostering effective

dispositions through the DPPE of developmental clinical assistance as well as a link between

professional judgment and professional action. How and to what extent is teacher

professional action linked to their professional judgment?

Case Study Design

Case study methodology was used in an attempt to address the research questions. Campbell and Stanley (1963) describe the case study as:

X   O

Where X is an intervention or curriculum and O is the observation of a case involved in X.

Yin (2003) described case study research as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13). It is virtually impossible to study professional judgments and professional actions outside the real-life context of mentoring and teaching. They are embedded within each other. Merriam (1998) also supported the use of case study for similar reasons considering educational situations under study can rarely be extracted from context. In addition, Yin described the case study as having three distinctive capabilities:

Copes with the technically distinctive situation in which there will be many more variables of interest than data points;

Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and;

Benefits from the prior development of theoretical propositions to guide data collection and analysis (p. 13-14).

The use of case study methodology in the current research project allowed for an exploration and description of dispositions in the contexts of mentoring and classroom instruction. As Shulman (1998) states, "cases capture pieces of experience that initially existed solely within the life of a single individual, and they transform solitary experience into text" (p. 525).

Dispositions should be viewed as an individualistic phenomenon. In order to make connections between professional judgment and professional action, individuals must be studied.

Case study methodology has often come under criticism for being a weak and non-scientific means by which to conduct research. However, a recent definition of "scientifically-based research" by the Education Sciences Reform Act of 2002 supports inquiry that adheres to the following standards:

- Research that is an application of rigorous, systematic, and objective methodology to obtain reliable and valid knowledge relevant to education activities and programs; and

- Research that presents findings and make claims that are appropriate to and supported by the methods that have been employed (Eisenhart & Towne, 2003 p. 36).

Further, the term itself implies the use of empirical methods of observation or experimentation that present reliable data. Research designs and methods must be appropriate for the questions at hand. They should be presented with detail and precision sufficient for replication and/or further research. The steps of the research design in this study illustrate the rigorous attention given to the planning, implementation, and analysis of an effective, scientifically based means of research. Taken from Yin (2003), these steps have been used in a plethora of fields including education, medicine, and business and conform to the goals and methods characteristic of those considered "scientific". Donald Campbell, once a well-known critic of the case study, champions Yin's efforts to amalgamate the goals of scientific research with methods and procedures for case study design. "[He] epitomizes a

research method for attempting valid inferences from events outside the laboratory" (Yin, 2003, p. ix).

Study Questions

The "how" questions used for this research imply the use of case study versus research that is more experimental. It maintains a connotation of exploration over a time of events. Further distinction includes extent of control over the events and a focus on those occurring in the present. For case study research, there is no requirement (and in many cases no possibility) that the investigator have control over behavioral events. In addition, the research was done with persons currently involved in the context whereas other methods such as histories rely mainly on artifacts, documents, etc. considering key participants are no longer living. For the purpose of this research, questions have been stated in the "how" form, in a contemporary context, and with the investigator having no control over the behavioral events. The two main questions are:

How does the professional judgment of mentor teachers link to their professional

action as they assist in beginning teacher development?

How does professional judgment of beginning teachers link to their professional

action as they address the needs of diverse learners?

Study Propositions

Before beginning a case study, investigators should state propositions that declare the direction their study will take. Such propositions often emerge from the theoretical framework upon which the study is based and lead the researcher in examining the data. Two main propositions were established for this study.

Dispositions as Three Cognitive Domains

The first proposition finds root in the three specified domains of professional judgment and action. The moral/ethical, conceptual, and ego constructs were selected for their importance in regards to teaching. Classrooms involve a plethora of moral decision making in terms of selection of content, distribution of resources, and reaction to student challenges. Conceptual complexity involves an understanding of concepts at an abstract level. Teachers at higher conceptual levels have a greater ability to be flexible and adapt to the needs of students. Finally, the dimension of ego refers to levels of self-knowledge. The ego, often termed the "executive" frames how decisions are made and is based in an understanding of one's own emotion and the emotions of others. This study focused on these three domains of adult cognition in an attempt to link the professional judgments of each to observed professional actions.

DPPE Through Phases of Coaching

Adult cognitive development can be fostered through deliberate psychological and professional education (Reiman & Johnson, 2004). Dispositions in terms of professional judgments and professional actions were examined in the context of adult learning as described by the framework in Appendix B. The framework was executed using a vehicle of coaching and assistance found in Appendix C. Mentors and beginning teachers engaged in cycles typically consisting of the phases described below. Based on the work of Reiman and Thies-Sprinthall (1998), it is in these phases that the investigator proposed manifestations of professional judgment and actions would occur.

1. **Phase One** is unique to developmental clinical assistance and can be traced back to the works of Carl Rogers (1969) and Thomas Gordon (1974).

Establishing a relationship requires a coach who is caring and helpful, a model of effective instruction, and is both supportive and challenging. The coach must start with getting to know the learner through a building relationship conference where active listening and effective communication is essential. This phase allows the learner to express feelings and concerns within a comfortable, supportive environment. This phase is not repeated as part of the cyclical process.

2. **Phase Two** is known as the action phase since it consists of creating a plan for a new behavior. Developed by Joyce and Showers (1995) an effective coaching plan should have four components: exploration of theory and rationale, demonstration or modeling, practice with feedback, and adaptation and generalization, with each component meeting the individual conceptual needs of the learner. The plan itself, analogous to a map, is a guide for what the coach and learner have mutually agreed upon as the teaching behavior focus (method or behavior which needs altering) of the cycle of assistance. It allows for a discussion of current strengths, a list of readings addressing the desired focus, opportunities to observe the behavior in others, a rationale of how the behavior will be practiced and mastery demonstrated, and estimated time and resources needed.

3. **Phase Three** involves the participants engaging in a pre-conference. This conference allows teachers to share with the coach thoughts and feelings about the upcoming observation and to discuss learning outcomes, teaching behavior focus, data gathering procedures, logistics, and scheduling. This

stage allocates time for the teacher to reflect critically on the lesson being

taught and on the behavior focus being demonstrated before the observation.

A coach must be able to actively listen to the teacher to gain insight into

feelings and perceptions.

4. **Phase Four** is described as "observation with a purpose" and necessitates a

range of data collection methods spanning the quantitative/qualitative

spectrum. Such techniques are not used as evaluative measures, but to

describe the outcomes and behaviors agreed upon in the previous phases. The

data are then used to make future decisions about teacher learning as it is

analyzed in Phase Five.

5. **Phase Five**, analyzing the teaching/learning processes, requires that the coach

have knowledge about various methods of instruction and teaching behaviors

and be able to provide information to the teacher based upon his or her

conceptual need whether it be more supportive or more challenging. It also

encourages the beginning teacher to be more reflective and analytical in

regards to his or her own teaching behaviors.

6. **Phase Six,** the post-conference, allows the coach to channel the teacher into a

discussion about the lesson observed. Skilled mentors allow the teacher to

reflect by listening and probing for information, which supports self-

acquisition of knowledge about desired outcomes and teaching behaviors.

Such a conference provides feedback and increases growth through six steps:

discussion of feelings, review of learning outcomes, discussion of classroom

management, review of teaching behavior focus, focus for next coaching cycle, and a summary.

7.   **Phase Seven** is a collaborative step in which observational data and reflections made during the post conference are used to develop a coaching plan which either continues a focus on the same behavior or, in the case of mastery, moves on to another area. Thus, the cyclical pattern begins again (usually at Phase Two if the teacher-coach team remains the same).

Units of Analysis – Defining the Case

Deciding on the unit of analysis involves the process of defining the "case" being studied. Often, but not necessarily, the case is a person and can be viewed as holistic or embedded with subunits. For the purposes of this study, however, the units of analysis were professional judgments and actions. Embedded within these units are the three specific domains previously discussed: moral/ethical, conceptual, and ego. To provide a more robust description and explanation of the questions at hand a multiple case design was used. Three cases were purposefully chosen to represent a variety of professional judgment levels.

Linking Data to Propositions – Multiple Sources of Evidence

Two sets of propositions were stated previously: Dispositions as three cognitive domains and development through clinical assistance. Multiple sources of evidence, both quantitative and qualitative in nature, were used as a source of triangulation of data and method to increase the validity of the findings.

Gathering Data on Professional Judgments as a Predicted, Theoretical Pattern

Three dispositional domains of adult cognition were examined. Quantitative measures were used to assess professional judgment and provide a theoretical pattern

predicting judgments and actions of each mentor and beginning teacher. The three

instruments are overlapping for the purpose of assessing cognition. Campbell & Stanley

(1963) refer to "the enormous complexities of the human" too intricate for "one-variable-at-

a-time research" (p. 3). Taken together, the construct of the DIT-2, PCM, and SCT portray a

theoretical predictive model of professional judgment and action as shown in Figure 3.1.
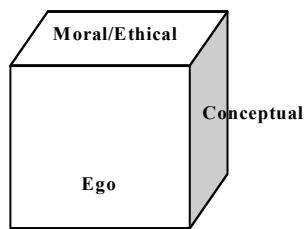
Figure 3.1: **Three Dimensions of Adult Development** (Adapted from Reiman and Thies-

Sprinthall, 1998, p. 43).

As shown in Figure 3.1, each domain represents a separate dimension of adult development,

however all are necessary to complete the cube.

      Defining Issues Test. An updated version of the Defining Issues Test (DIT) (Rest &

Narvaez, 1998) was used as a measure of moral/ethical judgment. Adapted from Kohlberg's

stages of moral development, the DIT is an objective, multiple-choice test assessing

participants' framework for processing and making decisions about ill-structured dilemmas

(including the famous Heinz dilemma). The DIT works under the assumption that

interpretation of such dilemmas will change with time and education. This assumption is

supported by studies numbering in the hundreds that have used the DIT (Rest & Narvaez,

1998). Participants taking the assessment are presented with six dilemmas. They are then

asked to evaluate 12 statements on a scale of one to five according to importance (five being

"great importance") to solving the dilemma. The 12 statements are then ordered from the most to least important. Final scores are calculated as a P score indicating the percent of postconventional reasoning participants are using when making decisions about moral/ethical dilemmas. The P score ranges from 0 – 95%. Results on the DIT also provide information on the distribution of reasoning in terms of schema. Recent research by Rest, Narvaez, Thoma, and Bebeau (1999) have reconceptualized moral judgment as a broad based theory of three schematic structures discussed in Chapter Two: the personal interest schema (Kohlberg's stages 2-3); the maintaining norms schema (Kohlberg's stage 4; and the postconventional schema (Kohlberg's stage 5-6).

For the purpose of this study, a second edition of the DIT, the DIT-2 was used. Rest, Narvaez, Thoma, and Bebeau (as cited in Rest & Narvaez, 1998) report the DIT-2 as a more up-to-date, reliable and valid form of its predecessor. Although it is shorter (five dilemmas versus six) quality is not sacrificed. Fewer results are discarded and directions are easier to understand.

Participants in the study were chosen based upon their P score. Research conducted with teachers reports an average P score in the 40s based on a 0 – 95 range (Chang, 1994). Three mentor teachers were selected from a group of naturally assembled program participants (the participants were not assembled as part of the case study research, but as part of an already existing intervention). One mentor represented an average range of moral judgment (P score in the 40s); one mentor was selected based upon scoring below the average; and finally, one mentor represented an above average percentage of postconventional judgment. In terms of reporting results, however, the three schemas were used for the predicted and observed patterns of moral judgment and action. Considering the

current research and the trend to move towards a more schematic assessment of moral judgment, using the three categories personal interest, maintaining norms, and postconventional was more fitting. Both sets of data, P score, and distribution of reasoning across the three schemas were provided by the results of the DIT-2 (Rest & Narvaez, 1998).

Test-retest reliability and internal consistency has been reported at .75 for the original DIT (Rest, *et al.,* 1999). Used in over forty countries, content validity of the measurement is moderate to high. A measure of construct validity in terms of the DIT being a measure of cognitive structures is .60. Concurrent validity as reported Rest and his associates (1999) has been at moderate levels for prosocial behavior (.31) and political views (.40 - .65). Moderately high levels of concurrent validity has been found between Loevinger's Scale of Ego Development (.65) and Kohlberg's Moral Judgment Interview (.65). Gender accounts for only 0.5% of the P index. The DIT-2 is an updated version of the test and although it has not been used as extensively as the original DIT, validity had remained strong with a correlation between the two tests reported at .79 (Rest, 1998).

Paragraph Completion Method. As a measure of conceptual complexity, the Paragraph Completion Method (PCM), developed by Hunt (1971) uses a semi-projective format to elicit participant responses. The instrument is organized into six topics, each written as a paragraph stem to which three to four sentences are written by the participant. Stems include, "When I think about rules…" "When I am criticized…" "When I think about parents…" "When someone does not agree with me…" "When I am not sure…" and "When I am told what to do…" Each of the six responses is given a score of zero to three according to a published scoring manual (Hunt, 1978). The six scores are then calculated as a composite with a final score being an average of the three highest scores. For the purpose of

this study an outside rater trained by experts in the assessment scored the samples. The rater chosen was trained for at least three days in a training session reported to have an average inter-rater reliability of .88 (Gardiner & Schroder, 1972). The researcher then used a random number generator to assess at least 20% of the items for each participant. Inter-rater reliability with the trained rater was .85. In terms of construct validity, over 200 studies have utilized the PCM with results indicating a correlation between score and performance of tasks of cognitive complexity. In a review by Miller (1981), moderate support was found for predictive validity summarizing that adolescents and college students at higher conceptual levels preferred less structure and showed more involvement in the learning process. Concurrent validity was reported at low levels in reference to intelligence (.09 – .29), age and grade (.08 – .17), academic achievement (.16 – .17), and personality measures (.12 – .34) adding significance to the test as an independent measure of cognition (Hunt, 1971). Hunt has also found differences in social class (middle higher than lower class) and gender (females score higher than males). Finally, a slightly moderate correlation has been found with Kohlberg's Moral Maturity Scale (.34) and Loevinger's Scale of Ego Development (.23).

Sentence Completion Test. Jane Loevinger developed the WUSCT (Washington University Sentence Completion Test) as a measure of ego development (1998). Consisting of 36 sentence stems such as "The thing I like about myself is…" and "I feel sorry…", the instrument gives a direct frame of reference of the respondent. Each of the stems is scored separately as one of the ten stages previously reviewed: Presocial, Symbiotic, Impulsive, Self-Protective, Conformist, Self-Aware, Conscientious, Individualistic, Autonomous, and Integrated. An outside rater trained by experts in the assessment scored the samples. The

rater had been trained in sessions reporting an inter-rater reliability of .94 with an internal

reliability averaging .87 (Loevinger, 1998). The researcher then used a random number

generator to assess at least 20% of the items for each participant. Inter-rater reliability with

the trained rater was .88. Test-retest reliability was reported between .72 and .79 (Loevinger,

1998). Construct validity was reported between .58 and .61 for female college students (Oja,

1978). Predictive validity is high considering the nature of the test is projective using the

participant's own frame of reference. Concurrent validity was assessed at .60 with

Kohlberg's Moral Judgment Interview and .40 with Hunt's measure of conceptual

complexity (Loevinger, 1998).

Table 3.1 summarizes the three instruments being used to assess professional

judgment in terms of reliability and validity.

Table 3.1: Psychometric Summary of Three Instruments

	Reliability	Content Validity	Construct Validity	Predictive Validity	Concurrent Validity
Defining Issues Test (Rest, 1986)	Test-Retest = .75 Internal = .75	Moderate - High	Moderate (.60)	Moderate	Ego (.65) Moral (.65)
Paragraph Completion Method (Hunt, 1971)	Inter-Rater = .80 - .95 Test-Retest = .45 - .56 Internal = .70	Moderate	High in terms of cognitive complexity	Moderate	Ego (.23) Moral (.34)
Sentence Completion Test (Loevinger, 1979)	Inter-Rater = .94 Test-Retest = .72 - .79 Internal = .77 – .91	High	Moderate (.58 - .61)	High	Conceptual (.40) Moral (.60)

As Table 3.1 shows, the three instruments being used have a significant research history with

moderate to high levels of reliability and validity. This provides a fair amount of confidence

in the ability of the instrument to present an accurate and independent pattern of

moral/ethical, conceptual, and ego judgment.

Gathering Data on Professional Actions

Data were gathered around the proposition that professional judgments and actions would manifest during a cycle of assistance embedded within the framework of developmental coaching. These data were used to formulate observed patterns of dispositions. The cycle of assistance consisted of conferences between the mentor and beginning teacher, a demonstration component by the mentor, and a lesson observation of the beginning teacher. The seven phases as described earlier enabled the researcher to collect data on the professional actions displayed by each mentor and each beginning teacher.

Quantitative Data. Using an adaptation of the Flanders Interaction Analysis System (Flanders, 1967), actions and behaviors of beginning teachers in the instructional context were measured at three points during the observation cycle: Before, during, and after. Flanders (1970) describes the system as a means of estimating "initiative-balance response of classroom interactions" (p. 36). This is achieved by having an observer tally within a ten-category system (see Appendix D). Seven of the ten categories are used to describe teacher behaviors; two describe student behaviors; and one is used to account for silence or confusion. In addition to being able to measure a ratio of teacher to student talk, the categories have been further divided by Gage (1978) into two clusters: Indirect interaction and direct interaction. Categories 1 through 4 (accepts feelings, praises or encourages, accepts or uses ideas of student, and asks questions) represents teachers that are more facilitative and discussion driven whereas categories 5 through 7 (lectures, gives directions, criticizes or justifies authority) describe those teachers that are more directive, lecture oriented. Flanders (1970) provides a detailed description of each category.

- *Category 1: Accepts Feelings* – The most rare of teaching behaviors, accepting and clarifying attitudes and feelings, has been reported only 1 in 1,000 interactions. Teachers must be able to identify a feeling or emotion being expressed by students. For example, "You sound very excited about what happened over the weekend" or "There seems to be a great deal of frustration between your group members."

- *Category 2: Praise or Encouragement* – Teacher approval is shown through praise and encouragement in hopes that the action or behavior shown by a student will continue. Although this can be done through simple words such as, "Right" or "Good" more genuine praise or encouragement comes through more specific teacher responses such as, "Great job! You were able to convert feet to inches to get the correct answer."

- *Category 3: Accepts or Uses Ideas of Pupils* – Being able to use the ideas of pupils in classroom instruction has been associated with higher achievement and positive student attitudes. Category 3 can be expressed in one of five ways: repeating main words; modifying or rephrasing; application of ideas to the next step; comparing with previously stated ideas; or summarizing. For example, "Juan expressed earlier that insects have six legs. How is this different from arachnids?"

- *Category 4: Asks Questions* – As seen in the previous example, asking questions can move the discussion to another level or introduce a new topic. This category is reserved for questions in which an answer is expected versus rhetorical questions that teachers often use when lecturing. Other types of questions can also be categorized as criticizing or directional. Consistency is perhaps the most important factor when

using the system so understanding how questions will be categorized before beginning is imperative.

- *Category 5: Lecturing* – Category 5 can include giving facts and information, offering opinions and thoughts, and interjecting comments. In more experienced teachers, lecturing is often integrated with Category 3. This category is reported as having the highest rate of frequency.

- *Category 6 and 7: Giving Directions and Criticizing or Justifying Authority* – Used with the intention of gaining compliance from students, Categories 6 and 7 are representative of teacher authority. Flanders points out that overuse of these categories can result in pupil dependence on the teacher. An example of Category 6 could be, "Take out your books and turn to page 23." Category 7 takes on a different tone, with the same objective, "If you would listen more carefully, you would know the page to turn to."

- *Categories 8 and 9: Pupil Talk (Response) and Pupil Talk (Initiation)* – Pupil talk is divided into two categories. Category 8 is coded when a student gives an answer to a direct question asked by the teacher. However, when students begin to express their own thoughts in relation to the topic, Category 9 is used. Flanders explained the difference, "…the contrast of indifference or conformity versus the expression of will through independent judgment" (p. 48). As students begin to exert their creativity and higher order thought processes, Category 9 should be used.

- *Category 10: Silence or Confusion* – Although it is useful to have a category in which one can code times of inactivity characteristic of silence or confusion, there is no means of discriminating between time spent thinking or processing and time spent

in nonproductive confusion. Observers can use tactics such as recording a stop and start time for confusion or making note of what was occurring during the time, however, considering the goal of the system is not to answer detailed questions in reference to student talk or silence, Category 10 does not require significant description.

Studies of validity by Gage (1978) show strong correlations between indirect interaction and student achievement where teachers were able to differentiate based upon developmental level. Further, it is suggested students in elementary school receive more direct structure with a suggested balance of 60% direct, 40% indirect. As students move to the secondary level a promotion of higher order thinking tends to come from teachers that use more open ended questions and respond to the ideas and feelings of students. For this level a ratio of 60% indirect and 40% direct teaching is optimal (Aspy & Roebuck, 1973; Gage, 1978, 1985).

Although Flanders and his associates did extensive classroom observations at different levels and across different content areas, the Flanders system of analysis for classroom interaction saw a decrease in use in the late 1980s. Some of this change was attributed to large-scale adoption of state teacher performance appraisal systems based on scripting and process-product research. Although the research showed that teachers using less direct and more indirect styles of teaching were producing higher levels of academic learning in their students, critics could not see the system being used on a large scale. Some scholars argued, as well, that the Flanders system did not account for qualitative differences in categories such as questioning. These criticisms notwithstanding, evidence continues to emerge regarding the utility of the Flanders system. For example, the categories are

illustrative of a massive review of studies conducted by Wang, Haertel, and Walberg (1993)

in which they reviewed evidence gathered from 61 research experts, 91 meta-analyses, and

179 research handbook chapters. The Flanders system also was cross-validated in a review

of 16 studies at the elementary level in terms of reading comprehension that confirmed the

importance of the relationship between direct/indirect teaching and increases in students'

learning (Rosenshine & Meister, 1994). Although the studies did not utilize the Flanders

method for collecting data, the results were similar. Teachers that used strategies such as

summarization of students' ideas, question generation, clarification of student input, and

prediction saw an increase in students' learning. In addition, teachers modeled strategies and

engaged students in dialogue. Students were then encouraged to generate questions, clarify

ideas, summarize, and predict what might happen next. The median effect size ranged from

+.32 on standardized tests of comprehension to +.88 on experimenter-developed

comprehension tests.

Research by Reiman (1999a) has resulted in a subdivision of the ten categories

providing a more comprehensive picture of the interactions between teachers and/or mentors

and learners. The adapted form of Flanders known as the GIAS (Guided Inquiry Analysis

System) (see Appendix E) can account for variance within categories. For example,

Category 6, "Gives Direction" is subdivided into either giving directions related to an

administrative task ("Take out your pencil and paper.") or a directing for the purpose of

analysis or reflection ("Give me some more details about your thoughts on pollution.").

For the purpose of this study, the GIAS was used to assess beginning teacher action in

three episodes of teaching. One episode occurred before the cycle of assistance, one during

the cycle and one after. Interaction ratings for the episodes were attained using a

computerized scoring program developed specifically for the GIAS. Quantitative data are presented in Chapter Four including percent of direct versus indirect interaction, and percent of teacher versus student talk.

Using an adapted form of the Flanders Interaction Analysis System and the GIAS, the actions of mentors in situations of assistances were measured. Assessment occurred at four points: a pre- and post-conference for a demonstration cycle and a pre- and post-conference for an observation cycle (see Appendix F and G for pre- and post-conference schedules). With slight changes in wording, the same system used with beginning teachers in instructional situations can be used with mentors in the context of conferencing. Interaction ratings for each conference will be attained using a computerized scoring program developed for the GIAS. Quantitative findings are presented in chapter four similar to those presented for the beginning teacher (i.e., average use direct versus indirect interaction and percent of mentor versus mentee talk, etc.).

Qualitative Data. Additional information on professional judgments and actions will be gathered through observations, interviews, and artifact analysis. All of the data gathered including that by quantitative means were used as a "convergence of evidence" to address the phenomenon of dispositions (Yin, 2003, p. 100).

Observations. Observations were conducted during conferencing for the mentors and during instructional times for the beginning teachers. These observations were the same episodes assessed by the GIAS and took place at various times during the coaching cycle. Doing observations allows for information to be gathered on contextual factors and non-verbal behaviors. Some observations were direct (in-person) and others were done via a laptop and webcam (camera equipped to digitally capture video to a computer). Using

technology can address one of the downfalls of observation, the possibility that behavior changes when one knows they are being observed. Although there may be knowledge that the camera is doing the "observing" it is small and can more easily blend into the background causing little effect on participant actions. Observations taken were then transcribed for both verbal and nonverbal behavior (i.e., circulating around the room, nodding head, etc.) and were coded according to the embedded units of analysis: moral/ethical, conceptual, and ego judgments and actions.

Interviews. Interviews were another source of qualitative data used to gather information targeting the specific domains being studied. Focused interview questions were designed for both mentors and beginning teachers and conducted either in person or via telephone. For the mentors, an interview schedule was designed to initiate judgments regarding the cycle before it occurred (Appendix H). For mentors and beginning teachers, a separate schedule (Appendix I and J) was used after the cycle with questions specific to moral/ethical, conceptual, and ego judgments. One of the main purposes of using an interview was to discover those judgments and actions in the participants that are not directly observable (Merriam, 1998).

Artifact Analysis. Finally, artifacts collected from the beginning teachers and mentors were analyzed. Upon completing each phase of the cycle, mentors engaged in reflection and self-analysis as part of their assignments for the DPPE course. This included focused analysis such as use of active listening to more open-ended reflection. The beginning teachers also provided analysis and reflection based upon their instruction and information regarding meeting the needs of diverse learners. See Appendix K through O for sample activities completed by the participants.

Process of Coding Data

Data gathered through observations, interviews, and artifacts were transcribed by the researcher or by an outside source (also reviewed by the researcher). Four copies of each transcription or artifact for each case participant was made as modeled by Beal (1995). One set was compiled for each case participant and was left untouched, archived as raw data. Three other sets were compiled as moral/ethical data, conceptual data, or ego data each containing the interviews, observations, and artifacts for all participants. All data were secured in a locked file cabinet in the researcher's office unless in the possession of the researcher during the analysis process. Interpretation of the data involved focusing on one domain at a time as suggested by Miles and Huberman (1984). The data were coded by the researcher according to a list of categories or "decision rules" predetermined by the literature presented in chapter two (Miles & Huberman, 1984, p. 246). It was then numbered and a random-number generator was used to select 20% of the data from each domain. A second rater, trained in both theories of adult development as well as processes of mentoring, supervision, and effective teaching, coded the random sample of data, which resulted in an inter-rater reliability with the researcher of .73. The conceptualization of each domain used by the raters is now explained and illustrated.

Moral/Ethical Domain. Table 3.2 represents the predicted pattern for the moral/ethical domain and is presented in terms of three schemas: personal interest, maintaining norms, and postconventional. These schemas can be interpreted as judgments and corresponding actions moving left to right across the table.

Table 3.2: Moral/Ethical Judgment and Actions

MORAL/ETHICAL SCHEMA	JUDGMENTS	ACTIONS
PERSONAL INTEREST SCHEMA	Defines "on task" behavior as being when learner is actively working on assignment given by instructor. Sees role as an authority in the classroom/relationship. Views rules for the purpose of maintaining order. Has an orientation towards need for learner conformity. Considers only personal stake in reference to action. Sees problems as having only one solution.	Measures "on task" through behavioral observations only. Makes instructional strategies without regard to learner perspective or internal motivation. Takes more of a controller role in the classroom/relationship. Becomes easily bothered by socially defiant behavior. Creates rules without learner input. Takes challenges to rules personally. Shows no sensitivity to learners' emotional needs.
MAINTAING NORMS SCHEMA	Views issues from own or from school's viewpoint. Gives some consideration to learner perspective or internal motivation. Considers the purpose of rules and norms is to provide safety and stability especially for those that do not know each other well. Sees laws, rules, and norms as applying to everyone. Views the school in terms of its hierarchical structure (principal-teacher; teacher-student).	Establishes rules that are categorical, clear, and uniform. Obeys rules and norms (and expects others to do the same) out of respect for the social system. Works to maintain the established order in the classroom and school setting. Uses formulas and other proven methods to solve problems. Is willing to try new varied instructional strategies, although they are not part of repertoire.
POSTCONVENTIONAL SCHEMA	Realizes curriculum can be viewed from multiple perspectives. Considers the benefits and consequences of instructional choices. Takes into account a variety of learning styles when planning activities. Holds a humanistic-democratic view of learner discipline. Views rules as being designed to protect certain rights. Considers rules as alterable and relative. Is sensitive to student rights. Makes decisions based upon the context of situations. Self-concept is organized around moral principles.	Allows rules and norms to be shared and scrutinized. Uses individualized instruction to adjust curriculum to the needs of the learner. Encourages decision-making in learners. Makes extensive use of cooperative learning activities. Takes more of a facilitator than presenter role. Employs more interactive instructional strategies. Shows more tolerance of socially defiant behavior. Encourages learners to take part in rule making. Considers various viewpoints in social-conventional situations. Shows a willingness to help students understand and reason about ill-structured problems. High levels of ethical conduct in classroom and school commitments. Teacher is resolved to care about learners, curriculum, and school.

Rest, Narvaez, Thoma, and Bebeau (2000), present a description of each schema in general terms. Although the indicators given by the authors are not specifically geared towards the educational context they can be interpreted as such as seen in Table 3.2. For example, in the case of maintaining norms, teachers at this stage may create rules and procedures for their classroom that are "clear, uniform, and categorical" (p. 386). Teachers using a more postconventional schema, however, will view rules as a means of protecting the rights of students. Narvaez and Bock (2002) also present specific judgments characteristic of each schema that can be interpreted educationally. For example, a postconventional teacher views ideals as sharable and "open to scrutiny" and sees the classroom as a community of give and take (p. 306). Considering the schemas have a foundation in Kohlberg's theory of moral development, indicators can also be found in corresponding stages. The personal interest schema, indicative of Kohlberg's stages two and three, describes a strong orientation towards conformity. Teachers using this schema do not acknowledge students' interests, needs, or viewpoints when creating class rules or dealing with social defiance (Kohlberg, 1969). These characteristics can be translated into mentor judgment and action as well. For example, mentors using the personal interest schema are concerned only with what they have invested in the mentor/mentee relationship.

Other scholars have contributed to the predicted theory with data specific to education. Chang (1994), in her review of empirical studies, found teachers at higher levels of moral reasoning (postconventional) considered the act of being "on-task" differently for each student. In contrast, those using a personal interest or maintaining norms schema, viewed "on task" in behavioral terms only and as the same for each student. Similar information is true for case study results by Johnston and Lubomudrov (1987). Teachers

with a low moral reasoning had more of a "personal interest" in the classroom. They worked to "maintain a stable social order" and viewed themselves as the ultimate authority in the classroom (p.4).

Table 3.2 symbolizes a conceptualization of past theories and research in moral/ethical judgment. It is interpreted in terms of current classroom and school structure and has been separated into predicted patterns of judgment and action (across the horizontal axis). Observed patterns will be analyzed in terms of these indicators.

Conceptual Domain. Conceptual judgment and action is shown in Table 3.3 and is based largely in work by David Hunt (1976). Hunt noted that teachers at higher stages of conceptual/reflective reasoning were able to "read and flex" meaning they were highly adaptive according to the needs of their students. He listed specific descriptions of teacher judgments and actions divided into three stages. Although labeled by Hunt as Stages A, B, and C, there has been a recent convergence with King and Kitchener's theory of reflective judgment resulting in three stages of conceptual/reflective judgment: pre-reflective, quasi-reflective, and reflective (King and Kitchener, 1994). These categories are shown down the vertical axis of Table 3.3.

Table 3.3: **Conceptual Judgments and Actions**

CONCEPTUAL LEVEL	JUDGMENTS	ACTIONS
PRE-REFLECTIVE	Thinks concretely. Views knowledge as fixed. Views teaching as transmission of facts. Places a high value in structure. Does not tolerate ambiguity well. Has difficulty recognizing own and student feelings. Views events in terms of "right" versus "wrong" only. Is concerned with pleasing others, particularly authorities.	Uses methods of teaching proven to be successful. Expects compliance from students and exhibits compliance as a learner. Exhibits little self-direction. Utilizes lower levels of questions during instruction (Bloom's Taxonomy, 1-2). Does not question authority. Sticks to the stated curriculum. Does not engage in evaluation of evidence. Works better in learning environments with high structure.
QUASI-REFLECTIVE	Has an awareness of difference between concrete and abstract. Has an increased tolerance for variations in classroom or relationship structure. Makes evaluations that are appropriate to assignments. Views facts as different from interpretation. Holds interpretations that are subjective, relative, and situation-sound. Has difficulty evaluating evidence across a variety of perspectives. Beliefs are justified within a particular context.	Uses some variation in instructional methods. Begins to teach for generalization and for skills with less emphasis on learner understanding. Shows some sensitivity to the emotional needs of learners. Exhibit more autonomy and use of self-directed learning. Imitates and applies new teachings without deep understanding of rationale for learners. Utilizes more levels of questions during instruction (Bloom's Taxonomy, 1-4). Acknowledges learner ideas by repeating content.
REFLECTIVE	Thinks abstractly. Views knowledge as a process of successive approximations. Has understanding of appropriateness of various instructional models. Holds a high level of tolerance for ambiguity and frustration. Makes evaluative judgments are made based on objective criteria. Values collaboration. Considers information from a variety of sources when making decisions about ill-structured problems.	Exhibits originality in adapting innovations in the classroom. Is able to employ various teaching models. Shows articulation in analysis of own teaching both in content and feeling. Is able to continuously reflect on experiences, making adjustments when necessary. Utilizes all levels of questions in instruction (Blooms 1-6). Asks for rationale and reasons for directions. Engages in self-directed learning. Works better in learning environments with low structure. Is able to "read and flex" with learners. Evaluates classroom decisions in terms of what is most reasonably based on current evidence and reevaluates when new evidence, perspective, or tools of inquiry become available. Paraphrases and uses learner ideas and feelings.

As shown in Table 3.3, differentiation of the stages occurs mainly in the ability to employ a variation of teaching methods and instructional strategies based upon a deep understanding of the impact on learners (McKibbin & Joyce, 1981). Teachers at the quasi-reflective level are willing to employ new styles of teaching and mentoring, but more as a mimic of other teachers or mentors versus adapting their actions to develop student understanding. Reiman and Thies-Sprinthall (1998) described teachers at the reflective level as "more adaptive in teaching style, more flexible, and more tolerant of ambiguity" (p. 43-44). It has also been postulated that teachers or mentors as higher levels of reflective judgment are able to consider more varied perspective and stress interdependence when making decisions about ill-structured problems (Miller, 1981; Reiman & Watson, 1999).

Table 3.3 illustrates the move through pre-reflective, quasi-reflective, and reflective categories down the vertical column. Such movement indicates increased perspective taking, tolerance, and flexibility. The horizontal rows in Table 3.3 display how such judgments conceptualize into actions such as adapting to the needs of learners and encouraging self-discovery of knowledge.

Ego Domain. Table 3.4 portrays judgments and actions of the ego domain. Jane Loevinger (1976) theorized a progression through ten stages. For the purpose of continuity in collecting and reporting data in this study, these stages have been reconceptualized into three categories similar to Loevinger's original work (Loevinger, 1977): preconventional, conventional, and postconventional shown in the first column of Table 3.4. Across the horizontal axis of the table, specific indicators of judgment and action for each category are listed.

Table 3.4: Ego Judgments and Actions*

EGO LEVEL	JUDGMENTS	ACTIONS
PRE-CONVENTIONAL	Views role of teacher as a presenter of information. Has a need to minimize controversy. Does not perceive problems or recognize need for change. Is wary of collegial relationships. Does not consider long-term goals or ideals. Lacks ability to empathize.	Impulsive and self-protective. Attributes problems to other people. Maintains established rules and school policies. Exploits relationships. Focuses exclusively on self. Has a preoccupation with control and having the advantage. Acts deceptively and is opportunistic.
CONVENTIONAL	Places a high value on conformity to social norms. Is concerned with appearances and social acceptability. Perception of self and others based upon conventional stereotypes. Values niceness, cooperation, and helpfulness. Continues to show concern for adhering to norms and with appearances (concerned with external approval). Has an awareness of individual differences. Considers exceptions and contingencies. Is empathetic to the needs of the learner. Views purpose of education to provide life skills and develop a greater self-awareness. Has a capacity for self-awareness and self-criticism. View long term self-actualization and goals. Sees rules as not absolute. Considers the perspective of others. Views self as responsible for others.	Is often helpful in hopes of belonging. Follows school decisions with blind obedience. Describes emotions in simple language (i.e., glad, sad, mad, scared). Judges self and others in terms of stereotypical roles. Displays beliefs and principles do not match willingness or ability to act on such. Continues to conform to norm although beginning to recognize exceptions. Exhibits a freer flow of expression about self, self-related experiences, and self as reflected in others. Expresses emotion in one-dimensional terms. Offers descriptions that are based on self-evaluated standards or professional identity. Is able to express past feelings with intensity although present feelings are distrusted and feared. Has a tendency to be self-critical or feel excessive responsibilities for learners. Highly values personal or learner achievement in terms or own standards. Evaluates and chooses rules for self. Thinks in terms of polarities (i.e., dependent vs. independent, trivial vs. important) Focuses on goals.
POST-CONVENTIONAL	Considers differences in individual learners. Values interdependence in interpersonal relationships. Views challenges in terms of multiple personal and professional roles. Is able to better understand paradoxical situations. Views process from a whole and from its parts. Is able to assume multiple perspectives. Cherishes personal ties. Has a high level of sensitivity to individual differences. Recognizes the need for learners to construct understanding through discovery. Views reality as complex and multifaceted.	Displays high degrees of flexibility, tolerance, and sensitivity. Is very specific about and able to differentiate personal emotions. Displays an interest in growth in multiple roles. Show increased respect for individuality, especially in terms of those that are different from self. Challenges learners to be open to new ideas and fosters curiosity (i.e., creates an environment in which mistakes are acceptable and necessary for growth). Acknowledges and deals with conflict rather than ignoring it. Encourages learners to seek knowledge independently. Vividly conveys emotions through spontaneity, genuineness, and intensity.

*Note: Indicators are purposefully ordered in each cell to indicate a movement from less to more complex judgment or action for each particular level.

In order to signify various levels of complexity within each of the three levels, indicators have been ordered from less to more complex indicating a growth in cognitive complexity as noted at the end of Table 3.4. It is important to understand, however, that higher does not necessarily mean happier, just qualitatively different in terms of one's judgment and action in the ego domain. As Hy and Loevinger (1996) explain, people can be successful at various stages, but have different approaches to dealing with the integration of intra- and interpersonal awareness. The preconventional level is characteristics of persons who are impulsive and self-protective as illustrated in Table 3.4. Although it is unlikely that adults exist in this level, those that do may use judgments and show actions that are "opportunistic, deceptive, and preoccupied with control and advantage in relations with other people" (Hy & Loevinger, 1996, p. 17). Teachers at this level may lack empathy for their students or colleagues and have a strong need to minimize controversy thus placing blame on others (or external factors) or not recognizing problems in general (Hy and Loevinger, 1996). The second level, conventional reasoning (Loevinger's stages of conformity, self-awareness, and conscientiousness), begins with a strong urge to conform to social norms and a concern for appearances and external approval (especially from those in positions of authority). Movement through this level shows an increased awareness of other perspectives with an ability to be self-critical and set goals for future growth. Teachers and/or mentors at the beginning of the conventional level tend to view themselves and their students in stereotypical roles and view learning as adhering to a mandated curriculum with a focus on teaching skills (Hy and Loevinger, 1996; Cummings and Murray, 1989). As teachers evolve through the conventional level, they may show more ability to critique their own teaching and evaluate their work and the work of their students in terms of self-set standards. There is

a freer expression of emotion at higher conventional levels versus expression of emotions in one-dimensional terms or the use of simple language (i.e., mad, sad, glad, scared) characteristic of teachers at a lower conventional level. Finally, the postconventional level represents the individualistic and autonomous stages from Loevinger. Characterized by an ability to assume multiple perspectives, teachers at more complex levels of postconventional reasoning view education as a process of discovery acknowledging the importance of mistakes as part of learning (Hy and Loevinger, 1996). Teachers at this stage tend to have a high degree of sensitivity to the needs of other individuals as well as themselves showing an interest in growth in various roles (teacher, mentor, mother, partner, etc.). The categories of ego judgment and action, seen on the vertical axis of Table 3.4, represent a movement from being egocentric and controlling (pre-conventional) to being integrated through developing awareness of self and of others (post-conventional).

Linking Professional Judgments and Actions - Data Analysis

Analyzing the data gathered on professional judgments and actions with that of the predicted theoretical pattern was done by using a method of pattern matching (Campbell, 1975). Such a method allows for a comparison of an empirically based pattern with one that was predicted as shown in Figure 3.2 (Trochim, 1989).

Theoretical Realm

Dispositions are attributed characteristics of a teacher that represents a trend of a teacher's judgments and actions in ill-structured contexts. In reference to teaching, such dispositions are viewed in light of three cognitive domains.
- Moral/Ethical judgments and actions (Kohlberg/Rest)
- Ego judgments and actions (Loevinger)
- Conceptual judgments and actions (Hunt).

CONCEPTUALIZATION

Theoretical patterns include judgments and actions described based upon hierarchical stages of adult development. These patterns are presented in Figures 3.3, 3.4, and 3.5

Analysis of match between theoretical and observed patterns

Observed Patterns

ORGANIZATION OF DATA

Data gathered through
- Cognitive measurements,
- Interviews,
- Field notes/incidental conversations,
- Self-assessments and analysis,
- Video and researcher observations, and
- Reflective journaling.

Observational Realm

Trochim, William M. (1989). Outcome pattern matching and program theory. *Evaluation and Program Planning, 12*, p. 355-366.

Figure 3.2: The Theory of Pattern Matching (Adapted from Trochim, 1989)

Trochim (1989) explains that a theory "postulates structural relationships between key constructs" for which predicted values can be generated (p. 356). As shown in Figure 3.2, these value, or predictions, encompass the theoretical realm of the act of pattern matching and are generated from research in the three cognitive domains: moral/ethical, conceptual, and ego. From here, the act of conceptualization translates the theory into specific indicators as explained previously and illustrated in Tables 3.2, 3.3, and 3.4. The bottom portion of Figure 3.2 represents the observational realm directing the investigation "in the form of impressions, field notes, and the like, as well as more formal objective measures" (Trochim, 1989, p. 356). Collection of data is organized and recorded as indicated by the bottom oval. Finally, the researcher has the inferential task of finding points of convergence or divergence between the predicted and observed patterns (designated by the double arrow in the middle of Figure 3.2).

Using Tables 3.2, 3.3, and 3.4, data gathered through interviews, observations, and artifacts were coded according to the predicted indicators. Pattern matching was then used to determine where a convergence and divergence existed between judgment and action. The pattern matching logic greatly increases the internal validity should a match occur (Yin, 2003). However, strength also lies in the occurrence of a mismatch leading to questions regarding the use of such theories in predicting professional judgments and actions. Further, construct validity is enhanced through acknowledging the existence of a nomological network. "This nomological network assumes that there is an interlocking system of principles which constitutes a theory and established relationships between theoretical constructs and observed measurements" (Davis, 1989, p. 31). How the results will be interpreted will now be discussed followed by a description of the sample and setting.

Interpretation of the Findings

Considering the exploratory and descriptive nature of the research, interpretation of the findings was based upon the stated propositions. Data gathered were coded according to each of the three domains and placed in a chart comparable to the theoretical pattern predicted prior to the study and shown in Tables 3.2, 3.3, and 3.4. Convergence and divergence will be discussed in the following chapters both quantitatively and in narrative form in relation to the research questions posed.

The Sample and the Setting

Six participants were purposely selected to become part of the study. They were all participants in a group of mentor and beginning teachers enrolled in an innovative program (the DPPE) to establish high-quality mentoring programs and retain beginning and lateral entry teachers. The county in which the participants worked was a rural Southeastern county characterized by a high loss of teachers (as high as 81% in some schools) and challenging demographic features (for example, high rates of unemployment and adults without high school diplomas). The program in which the participants were involved had the goal of preparing twelve mentors to support twelve beginning teachers while preparing the twelve beginning teachers to engage in building relationships and implementing effective classroom instruction. The program was voluntary and was designed as a college graduate level course meeting once a week for at least three hours. Faculty and a graduate student (the researcher) from a nearby university as well as two central office personnel from the county facilitated the course and were responsible for providing feedback to an assigned group of participants. Although the researcher was one of the facilitators, she did not directly provide feedback to the participants in the study.

In order to select subjects for the study, the professional judgment of participants was evaluated using the DIT-2 during the first session of the course. From these scores, three mentors were chosen representative of low (P = 28%), average (P = 46%), and high (P = 58%) levels of postconventional reasoning. This was conducted in coherence with published research reporting average teacher moral reasoning to be in the 40s on a scale of 0 - 95 (Chang, 1994). Considering the beginning teachers were naturally assigned to the mentors prior to the beginning of the study, the three beginning teachers assigned to the mentors selected became part of the study. Once the participants were chosen, the PCM and the SCT were administered. Each participant was awarded a $250.00 honorarium for being part of the study and was assured the use of a pseudonym for publication. The six participants are described below.

Dyad One

Logan was a high school Spanish teacher. She had been teaching for five years and began as a lateral entry teacher. Before entering the field of teaching, Logan worked as a veterinarian technician. She wanted to try education since she enjoyed working with students. Her parents were both teachers and after living in Mexico and Costa Rico, Logan decided to try teaching foreign language. Although she had days that are more challenging than others, she enjoyed teaching and looked forward to becoming a mentor. Logan was 28 years old and Caucasian.

Sherry, a 26-year-old Caucasian female, was Logan's mentee. Also a lateral entry teacher, Sherry was in her second year of teaching. She worked as a lab technician during and after college. Many relatives who were also all teachers had influenced her decisions in teaching. Sherry taught Earth and Environmental Science for grades nine through 12.

Dyad Two

Linda was 29 years old and African-American. She had been teaching for six years and during the study was a sixth grade math and science teacher working to become a mentor. Linda always had aspirations of being an educator and enjoyed talking about issues with her mother who was also a teacher. As a child, Linda experienced difficulty learning and found tremendous support from her teachers. This was something she carried with her in her own career. Linda was working on her National Board Certification and planned to attend graduate school in the future.

Linda's mentee was Joseph, a 24-year-old, Latino male. He entered teaching through a program known as Teach for America in hopes of making a difference in the lives of minority students. He was a sixth grade teacher in Language Arts and Social Studies with an undergraduate degree in Philosophy and Economics. Joseph was in his second year of teaching and considered himself to have a unique view of minority education. As an American of Puerto Rican descent, Joseph felt prepared to meet the challenges of diversity in the classroom.

Dyad Three

Thomas, a 32-year-old Caucasian male, also entered teaching lateral entry and was training to be a mentor. He was in his seventh year of teaching art education at the high school level. Before becoming a teacher, Thomas studied studio art and art history and worked as a golf caddy. A father and grandfather who were also teachers had tremendous influence on Thomas. He maintained a philosophy that all students need a positive role model and enjoyed seeing the positive effect he had on the lives of his students.

Susan, Thomas' mentee, was in her first year of teaching. She was Caucasian, 33 years old, and received an alternative license for education after working as a research technician in animal science at a state university. Susan was working on her teaching license through an alternative licensing program similar to that of the lateral entry requirements. She taught Earth and Environmental Science at the high school level. Susan had a husband who was also a teacher and three young children.

Table 3.5 summarizes the participants in the study.

Table 3.5: Summary of Study Participants

	Age/Physical Characteristics	**Certification Program**	**Years in teaching**	**Grade/Subject Taught**
Dyad One				
Logan (mentor)	28 year old Caucasian female	Lateral Entry	5	Grades 10 – 12 Spanish
Sherry (mentee)	26 year old Caucasian female	Lateral Entry	1	Grades 9 – 12 Earth and Environmental Science
Dyad Two				
Linda (mentor)	29 year old African-American female	Traditional	6	Grade 6 Math and Science
Joseph (mentee)	24 year old Latino male	Lateral Entry	1	Grade 6 Language Arts and Social Studies
Dyad Three				
Thomas (mentor)	34 year old Caucasian male	Lateral Entry	7	Grades 9 – 12 Art
Susan (mentee)	33 year old Caucasian female	Alternative Licensure	1	Grades 9 – 12 Earth and Environmental Science

The ages of the participants ranged from 24 to 34 years old with the mentors teaching an average of six years and beginning teachers, one year. Four of the participants were female,

two male. In addition, four of the participants were Caucasian, one was African-American, and one was Latino. As noted Table 3.5, most of the participants were lateral entry meaning they entered education without a teaching certificate and worked or were working on becoming certified during their first two years in the classroom. This type of licensure is common in areas characterized by teacher shortage.

Validity

Construct Validity

Being an exploratory and descriptive case study, the research at hand does not warrant addressing internal validity pertinent to studies making causal relationships (Yin, 2003). However, one of the reasons case study methodologies have received criticism by the research community is "the fact that a case study investigator fails to develop a sufficiently operational set of measures and that 'subjective' judgments are used to collect the data" (Yin, 2003, p. 35). For this reason, several steps were implemented to improve the construct validity of this study. First, multiple sources of evidence were used to gather data on the units of analysis. This includes quantitative (DIT-2, PCM, SCT, and GIAS) and qualitative (observations, interviews, and documents) methods converging upon objectives set forth by the research questions. Second, a chain of evidence was established and followed by an external researcher considered an expert in dispositional study. The researcher was able to trace the derivation of evidence from the initial research questions to the eventual conclusions and vice versa thus strengthening the validity of the study. Finally, and perhaps most critical, was the use of the pattern matching logic. By having a pre-established set of predicted theoretical patterns, subjective judgment left to the researcher is minimized when making conclusions based on trends observed during the study. An outside researcher,

considered an expert in dispositional research, evaluated convergence and divergence between predicted and observed patterns. Finally, the investigator did not know the results of the PCM or the SCT until after the data had been collected and coded significantly reducing possible researcher bias.

External Validity

Generalizing cases to a larger population has been yet another criticism of case study methodology. Such a barrier exists because it is virtually impossible to apply what is learned in one case (or even a few cases) to the greater universe. The goal of case study, therefore, should not be to generalize to other persons, but to generalize to the theoretical propositions set forth prior to data collection. Termed "analytical generalization" by Yin (2003), the goal of this study was to apply the results to the broader theory of dispositions in terms of professional judgments and actions. To assist in increasing the external validity of the study, three dyads (mentor/beginning teacher) were used in hopes of finding replication logic across cases.

Reliability

Reliability refers to the ability for a future researcher to replicate the study with the same cases and achieve the same results. For this reason, reliability focused on a reduction in error and biases of the researcher. Several steps can be taken to increase the reliability of a case study and were used in the current research. First, triangulation of data and methods was employed (Merriam, 1998; Stake, 1995; Yin, 2003). Both quantitative and qualitative methods were used to collect data. Sources included normed measurements, interviews, observations, and artifact analysis. Second, a case study database was created. As reports, interviews, observations, and documents were transcribed, they were copied and filed

according to the following system: one copy was left as an original in a raw data file, one copy was coded in reference to moral/ethical judgment and actions, one copy was coded in reference to conceptual judgment and actions, and finally one copy was coded according to ego judgments and actions (Beal, 1995). Finally, the chain of evidence conducted by the outside researcher was used to increase the reliability of the research.

Summary

Chapter 3 has presented the following: 1) an overview of the research questions, 2) an in depth look at the case study design as a scientific methodology including data collection and analysis, 3) a description of participants and setting (including selection process), and 4) a discussion of validity and reliability in terms of the research approach.

The purpose of this study was to discover what links may exist between teacher judgments and actions for mentors and beginning teachers. The research used a case study design that is both rigorous and scientific in nature. A theoretical framework was established in adult cognitive development and used to generate predicted patterns of judgment and action. The Defining Issues Test-2 (Rest, 1986), The Paragraph Completion Method (Hunt, 1971), and the Sentence Completion Test (Loevinger, 1998) were used to establish predictive patterns for each participant in terms of moral/ethical judgment and action, conceptual judgment and action, and ego judgment and action respectively. Quantitative and qualitative data were then gathered through the Guided Inquiry Analysis System (Reiman, 1999; Flanders, 1970) and interviews, observations, and document analysis. Convergence between the data gathered (observed patterns) and the indicators (predicted patterns) was then analyzed as well as congruence between judgments and actions using Trochim's (1989) pattern matching approach. Chapter Four presents the findings of the case study in reference

to mentor teacher dispositions with Chapter Five examining the disposition of beginning

teachers.

CHAPTER FOUR – RESULTS AND DISCUSSION OF MENTOR DISPOSITION

Introduction

In the next ten years, North Carolina will need 100,000 teachers to fill its classrooms (Teach4NC, 2003). Over two million teachers will be needed nationwide (Hussar, 1999). This need for teachers places renewed attention on induction programs that aim to develop and retain teachers. Such a comprehensive induction program would foster new knowledge, skills, and dispositions to support the learning of all students (NCATE, 2002; Serafini, 2002; NBPTS, 1989). Typically, schools of education and professional development programs have concentrated on the knowledge and skills that are requisite for high quality teachers, however, little has been done to promote the dispositional development of preservice, initially licensed, or mentor teachers (Raths, 2001). In fact, scant research even exists in regards to defining and clarifying the elusive concept of teacher dispositions.

Dispositions, defined as attributed characteristics of a teacher that represents a trend of a teacher's professional judgments and professional actions in ill-structured contexts, are not seen as a priority in teacher education programs much less programs focused on developing effective mentors (Reiman & Johnson, 2003; Katz & Raths, 1985; Wasicsko, 2002). Three reasons exist for the lack of attention to dispositional development: the lack of a clear, concise definition grounded in a theoretical framework; the absence of evidence connecting professional judgments and professional actions; and the need for specific descriptions of programs aimed at the development of disposition. These challenges apply not only to teacher education and teacher induction programs, but also professional development programs aimed at training mentor teachers. Developing high quality mentors should parallel the development of high quality teachers in the beginning of their careers

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considering mentor programs tend to align their goals and objectives with standards set forth for professional teaching. According to Wang and Odell (2002), mentors should assist and coach beginning teachers "to understand the principles of reform-minded teaching, reflect on the reasons for their teaching practices, develop deep knowledge, and form an intellectual foundation for continuous professional development" (p. 532). These goals emerge as mentors encourage the examination of judgments and actions of beginning teachers.

> It is an essential task for policymakers and program developers to help mentors learn how to support novices in reflecting on and discovering their conceptions of teaching and learning to teach. In this process, mentors need to learn how to help novices connect their inquiry and reflections to the general principles of teaching and learning to teach; mentors must also develop frequent dialogue about notions of good teaching (Wang & Odell, 2002, p. 533-534).

It is clear what mentors need to be doing. However, knowing what should be done, having the judgment to decide on a course of action, and actually taking action are very different aspects of the mentoring process that have not been investigated.

This study addressed these challenges in the context of mentor judgment and action. Dispositions were defined and examined within a theoretical framework of adult cognitive development. Case study methodology was then used to explore the congruence between a mentor's professional judgment and his/her professional action while engaged in a deliberate psychological and professional education program. Analysis was conducted in terms of how the mentor's disposition influenced interactions with the beginning teacher to whom they were assigned.

The research was guided by the following questions:

1. How does the professional judgment of mentor teachers correspond to their professional action as they assist in beginning teacher development?

2. How do these professional judgments and actions influence interactions with the beginning teacher?

Theoretical Framework

Defining Dispositions

Definitions of disposition found in standards governing accreditation of teacher education programs remain "fuzzy" and "confusing" to many college professors and teachers alike (Johnson, 2003). However, much can be learned from Lee Shulman's work (1998) of the shared characteristics between teaching and other professions. Acknowledging over a century of scholarly thinking, Shulman first noted that teaching was built on cognitive constructs in the moral and reflective domains (Dewey, 1904; Mentkowski & Associates, 2000; Oser, Dick, & Patry, 1992). Second, he described disposition as being both an action and an underlying judgment. Where many professional organizations will not argue that judgment and action are paramount, definitions for dispositions include a cadre of other aspects such as beliefs, values, and attitudes absent of a theoretical framework (NCATE, 2002).

Recognizing the need to accommodate these professional organizations as well as maintain a definition grounded in a framework of cognitive development of judgment and action, Reiman and Johnson (2004) proposed the following definition: Dispositions are attributed characteristics of a teacher that represents a trend of a teacher's *judgments* and *actions* in ill-structured contexts. Further, it is assumed that these dispositions, trends in teacher judgments and actions, develop over time in *deliberate professional education*

programs. This conception of disposition is grounded in a theory of adult cognitive development.

Adult Cognitive Development

Three dimensions of adult development are examined in this study as domains of professional judgment and action: the moral/ethical, the conceptual, and the ego. Reiman and Thies-Sprinthall (1998) described these domains as connected but independent; interacting as a coherent whole represented by Figure 4.1.
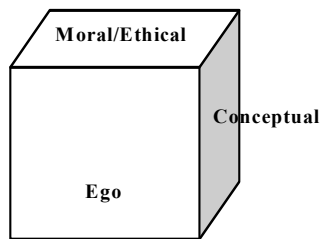
Figure 4.1: Three Dimensions of Adult Development (Adapted from Reiman and Thies-Sprinthall, 1998, p. 43).

The model portrayed in Figure 4.1 illustrates three domains having significant impact on the teaching profession whether in classroom teaching or mentoring practices. First, the mentor is an epistemologist and instructional manager able to consider various perspectives when solving problems (conceptual domain). Second, the mentor acts as a representative of democratic values and makes judgments based upon principles of social justice and diversity (moral/ethical domain). Finally, the mentor is self-aware while being responsible for the needs of learners and colleagues (ego domain) (Reiman, 1999; Watson & Reiman, 1999).

The next section illustrates the theoretical frameworks of these three dispositional domains. It is followed by a review of literature summarizing empirical studies connecting the domains to mentor judgments and actions.

Moral/Ethical Domain

Neo-Kohlbergian theory was used to interpret teacher/mentor construction and understanding of moral/ethical problems in the classroom (Rest *et al*., 1999). Neo-Kohlbergian theory emphasizes, "basic human rights, equal individual moral status, and rational, autonomous individuals who are free to enter into contracts and obligations" and assumes "some ways of thinking are better at supporting respect for individual human rights than are other ways of thinking" (Narvaez, 2002, p. 2).

A three-schema conception of moral judgment is employed. A schema is a cognitive structure of the long-term memory that works to facilitate the processing of information (Walker, 2002). It is formed when existing similarities and recurrences of experiences work to interpret new environmental stimulus. Narvaez and Bock (2002) described schemas as the supervisors of decision making and reasoning, acting for the most part without one's awareness. The integration of schema into the theory of cognitive development acknowledges the presence of other ideologies (i.e. religious or cultural) interacting with moral structures. The theory maintains that these socialized values act in conjunction with deeper cognitive structures versus acting independently. Three schemas have been developed as a way of understanding moral development in a "sociomoral perspective" (Rest, *et al*., 1999, p. 36).

First, the *Personal Interest Schema* describes individuals lacking in sociocentric
perspective. Decisions are based primarily in the personal stake of the decision-

maker stressing notions such as survival and "getting ahead" (Narvaez & Bock, 2002).

The *Maintaining Norms Schema* signifies an increase in an individual's ability to recognize society-wide cooperation. It emphasizes rules that are clear and consistent and applying to everyone. The social system is imperative (i.e., the hierarchical nature of a school) along with maintaining the established norms.

Finally, the *Postconventional Schema* is based in four specific components (Rest *et al.*, 1999). (a) There is a primacy of moral criteria. Social norms are not set, but are alterable and relative. (b) Idealized ways exist for humans to interrelate. (c) Ideals are both shareable and open to justification and scrutiny. (d) There is recognition of full reciprocity of social norms. They must be uniformly applied and unbiased.

Research on moral development using the Defining Issues Test spans 25 years and amounts to more than 400 publications. Validity of the assessment has been examined in various criteria such as level of education, which when studied longitudinally resulted in significant gains of moral judgment from the beginning to the end of one's college career. Finally, the DIT has been used to develop a deeper understanding of moral judgment across the professions with recent emphasis on examining correlations between judgment and action (Bebeau, 2002).

Ego Domain

Ego, according to Jane Loevinger (1976) acts as an executive, "a frame of reference that structures one's world" (p. 9). It has been viewed as a construct of personality that works to make sense of experience through an integration of interpersonal and intrapersonal

understanding, similar to theories of emotional intelligence. Loevinger's theory of ego personality suggests that ego is manifested in one of ten stages: presocial, symbiotic, impulsive, self-protective, conformist, self-aware, conscientious, individualistic, autonomous, and integrated. Adults typically fall within the impulsive to autonomous stages with the modal stage being self-aware. Very few individuals reach the integrated stage; hence very little empirical evidence has been gathered for stage ten. It is important to note however, people can be successful at various stages; higher is not always better, just qualitatively different (Hy & Loevinger, 1996). For the purpose of this study, the levels were compiled into three categories theoretically similar to Loevinger's original conception of ego (Hy & Loevinger, 1996).

1. *Preconventional* – Includes the impulsive and self-protective stages. Adults at this stage may use judgments and show actions that are "opportunistic, deceptive, and preoccupied with control and advantage in relations with other people" (p. 17). Teachers and/or mentors at this stage lack empathy for their students or colleagues and have a strong need to minimize controversy thus placing blame on others (or external factors) or not recognizing problems in general.

2. *Conventional* – Includes the conformist, self-aware, and conscientious stages. There is a strong urge at the beginning of the conventional stage to comply with the rules and norms of the group with a strong emphasis on respecting authority. As self-awareness increases, rules and norms remain important however, there is a trend to accept other perspectives and an ability to be self-critical. Teachers and/or mentors at the beginning of the conventional stage tend to view themselves and their students/colleagues in stereotypical roles and view learning as adhering to a mandated

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curriculum (Hy and Loevinger, 1996; Cummings and Murray, 1989). Self-reflection and analysis emerge later in the conventional stage as teachers develop their own standards for achievement (for both themselves and their students/colleagues) and exhibit a freer expression of emotion.

3. *Postconventional* – Includes the individualistic and autonomous stages. There is an ability to assume multiple perspectives at this stage. An increased tolerance for frustration and ambiguity is evident and a goal of self-fulfillment exists. Teachers and/or mentors at more complex levels of postconventional reasoning view education as a process of discovery acknowledging the importance of mistakes as part of learning (Hy and Loevinger, 1996). There is a pattern of increased sensitivity towards others as well as an interest in self-development in various life roles (i.e., mother, teacher, partner, etc.).

Significant efforts have been made to validate Loevinger's theory of ego development. Thousands of cases have been used to assess both the validity and reliability of the Sentence Completion Test as a measure of ego. The measurement has been employed in clinical studies, education intervention studies, and cross-cultural studies in Japan, Europe, Australia and more (Loevinger, 1998). Although trends are similar across studies, no claims are made for the universal applicability of the conception of ego development (Loevinger, 1987).

Conceptual/Reflective Domain

David Hunt (1975) devised a theory of conceptual judgment based largely on Piaget's premise of a developmental progression in cognition from concrete to more abstract conceptual understanding. "From a developmental view, conceptual level can be considered

in terms of increasing conceptual complexity, increasing interpersonal maturity, and increasing understanding of oneself and others" (p. 222). The theory, considered an interpersonal maturity model, has been extensively applied to teaching. Hunt postulated that teachers at a higher stage of conceptual judgment were better able to "read and flex" with their students (O'Keefe & Johnston, 1989) and exhibited conceptual understanding of the teaching/learning process. Translated into the mentor context, mentors are better able to "read and flex" to the needs presented by the beginning teacher. This can include two distinct characteristics of teachers/mentors. First is the ability to "read" cues given by students or beginning teachers such as disobedience or misunderstandings. Second, the teacher/mentor must "flex" the communicative approach used in response to the information presented by the student or beginning teacher.

Hunt's work inspired Karen Kitchener and Patricia King to study reflective judgment or how persons form judgments about ill-structured problems (King & Kitchener, 1994). They were particularly interested in the justifications persons used to form such judgments. Those at higher levels of reflective judgment were better able to understand and appreciate varied perspectives and could tolerate high levels of ambiguity and frustration.

The conceptual/reflective domain theorized by Hunt and King and Kitchener encompassed three levels:

Pre-Reflective – This level is characterized by thinking that is concrete. Knowledge is fixed and all problems have a solution. There is a high need for structure at this stage with little tolerance for ambiguity.

Quasi-Reflective – A growing awareness for alternative solutions increases at this level. Individuals are more open to other ideas and perspectives, although there is limited

use of such when making decisions. An increased tolerance for ambiguity is evident.

This is the modal level for most adults.

Reflective – Individuals at this level are able to weigh and balance alternative solutions.

They value collaboration and are able to synthesize and integrate complex intellectual

and interpersonal functions. There is openness to criticism stemming from a belief

that judgments made should be open to debate. A high tolerance for ambiguity exists.

As individuals progress from pre-reflective to reflective thinking, they progressively develop

tolerance for ill-defined situations and are able to be more self-analytical.

Conceptual/reflective theory has been used in studies sense the mid 1960s. Recent

longitudinal and cross-sectional studies by King and Kitchener (1994) indicated a

progression of reflective judgment in adults over time. The authors reported

conceptual/reflective judgment was necessary, but not sufficient for moral judgment. Hunt's

(1971) research has had significant impact on teacher development in terms of "reading and

flexing" with student behavior and found that teachers must learn to adapt to the needs of the

learner. Although research by Hunt did not necessarily address mentor development,

parallels are apparent such as the mentor needing to "read and flex" to the needs of and adapt

methods of coaching for the beginning teacher as a learner.

Review of Literature

Scant research exists relating mentor or supervisory judgment and action to the

domains previously described. Extensive reviews of literature in the moral domain and

conceptual domains contend that judgment and action are connected. However, the reviews

looked mainly at classroom teachers or specific subgroups of the general population (Blasi,

1980; Miller, 1981). Acknowledging that no perfect means exists by which to assess direct

correlation between an action and an underlying behavior, trends have emerged. For example, Chang (1994) found those at a higher level of moral reasoning held a more "humanistic-democratic view of student discipline" and were able to consider different viewpoints, held more tolerance for student disturbances, and stressed student understanding of the purpose of rules (p. 73). In a review of over sixty studies, Miller (1981) found a direct relationship between higher conceptual reasoning and behavior such as reduced bias and prejudice, increased empathy, greater use of indirective approaches to instruction, and more intrapersonal control. The following two studies found empirical evidence on mentor (or supervisor) judgment and action as it connects to the three domains previously discussed.

Thies-Sprinthall (1980) found that the judgment level of supervisors had significant impact on their actions in reference to evaluating student teachers. In cases where judgment level (in terms of conceptual and moral/ethical judgment) of the supervisor and that of the student teacher were both "high" or when the supervisor level was "high" and the student teacher "low", congruence existed between a subjective supervisor rating and the score received by the student teacher on the Flanders Interaction Analysis (a measure of teacher behaviors such as direct versus indirect teaching and the ability to paraphrase and use student ideas). However, in the case of the supervisor and the student teacher both having "low" judgment levels, the supervisor tended to assess the student teacher as average when the student teacher performance was actually very directive and lecture-based. Perhaps most significant were situations in which the supervisor was assessed as having "low" levels of judgment while the student teacher had a "high" conceptual level. A profound incongruence took place. The student teachers scored well on the Flanders indicating more open and responsive teaching behaviors yet were rated as average or below average by their

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supervising teachers. As noted by Thies-Sprinthall, "Supervisors clearly need a complex conceptual system as a basis for selecting appropriate learning experiences for beginning teachers" (p. 20). If these supervisors do not have the appropriate developmental systems needed for effective mentoring, preservice and beginning teachers may find themselves in a miseducative situation.

Reiman and Watson (1999) considered the effects of mentor behavior on the judgments and actions of beginning teachers. Their results indicated a significant growth in professional judgment of beginning teachers for whom their mentors had participated in a program designed to promote teacher development and transformation. The program, discussed more thoroughly in the methods section of this study, was a framework of integrated learning based on concepts of social role-taking (Mead, 1934) and a balance of support and challenge (Vygotsky, 1978). Teachers who worked with mentors involved in the program exhibited growth in terms of allowing more students to participate in class discussion. An increase in teacher willingness to reflect and analyze during conferences with their mentors was also found. Mentors were able to use a more learner-centered approach for assisting beginning teacher growth and showed great interest in collaboration. This study pioneers analysis of the impact mentors can have on beginning teachers and makes a connection between professional judgments and professional actions.

Methodology

This study utilized case study methodology to explore the dispositions of mentor teachers. Yin (2003) described case study research as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13). It is virtually impossible

to study professional judgments and professional actions outside the real-life context of mentoring. They are embedded within each other.

<center>*Setting*</center>

The definition of dispositions states that dispositions are developed in deliberate professional education programs. The context chosen for this study involved such a program. Termed developmental clinical assistance, the deliberate professional education adheres to seven principles of adult development found in Appendix B. Summarized, the conditions acknowledge the context of the learner and use new role-taking and guided inquiry to support a framework for learning. The mentor provides an environment that is both supportive and challenging in which the beginning teacher can optimize learning over time.

The seven conditions were being used as a foundation for an innovative program to establish high-quality mentoring programs and retain beginning and lateral-entry teachers in a rural Southeastern county experiencing high rates of teacher attrition. The program in which the participants were involved had the goal of preparing twelve mentors to support twelve beginning teachers while preparing the twelve beginning teachers to engage in building relationships and implementing effective classroom instruction.

<center>*Participants*</center>

Six participants agreed to be a part of the study, three mentors and the three beginning teachers to whom they were assigned (denoted as "dyads"). All participants were part of the deliberate education program described previously. *Dyad one* consisted of two female high school teachers. Logan, the mentor, was a 28-year-old Caucasian. She had been a foreign language teacher for eight years and entered the profession lateral entry (without a teaching

degree or specific training in education). Sherry, Logan's mentee, was in her second year of

teaching and also entered the field through lateral entry. A teacher of Earth and

environmental science, Sherry was Caucasian and 26 years old. *Dyad two* consisted of two

middle school teachers. Linda, a 29-year-old African-American woman, was teaching sixth

grade science and math while working in the program to become a mentor. Linda had been

teaching for six years and entered the profession after being trained at a traditional college of

education. Joseph, Linda's mentee, was a Latino male, 24 years old. He was a first-year

teacher of language arts and social studies who had entered the teaching profession lateral

entry through a program called Teach for America. Thomas and Susan were *dyad three*.

Thomas, Susan mentor, was a 32-year-old Caucasian male. He was a high school art teacher

who had entered the teaching profession seven years ago as a lateral entry teacher. Susan, a

33-year-old Caucasian female had just started her first year as a science teacher. Also a

mother of three children, Susan entered teaching through an alternative licensure program

similar to that of the lateral entry teachers.

<center>*Sources of Data*</center>

Quantitative Data

    Judgments. In order to select subjects for the study, the professional judgment of the

program participants was evaluated using the DIT-2 (Defining Issues Test, Rest & Narvaez,

1998) during the first session of the course. The DIT-2 is a multiple-choice measure of

moral/ethical judgment embedded in the individual schema previously described. Chang

(1994) reported teachers average in the mid 40s (on a scale of $0 - 95$) in terms of

postconventional moral reasoning. Reliability for the DIT-2 has been reported in the high

.70s to low .80s (Rest & Narvaez, 1998). From these scores, three mentors were chosen

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representative of a low (P = 28), average (P = 46), and high (P = 58) percentage of postconventional reasoning. Limitations do exist in terms of assessing deep structures with an objective measure versus a written or verbal task. Further, examination continues into the focus of the DIT on measuring macro-morality (society-wide structure) versus micro-morality (face-to-face relationships and individual development) although many argue that the two are inseparable (Walker, 2002).

Once the participants were chosen (beginning teachers naturally assigned to the mentors prior to the study agreed to participate once their mentors were selected), they were administered an assessment of ego judgment and conceptual/reflective judgment. The WUSCT (Washington University Sentence Completion Test, Hy & Loevinger, 1996) was developed as a projective measure of one's level of ego development. Using sentence completions, the WUSCT allows for the subject to use his or her own frame of reference to complete 36 sentence starters. For example, "Being with other people…" or "The thing I like about myself is…" Each stem response is scored according the stages previously described. A method of averaging is then used resulting in one stage score. For example, if an individual had a composite score of "5", that would signify a person functioning mainly in the self-aware (the modal stage for adults) stage of ego. Although inter-rater reliability for the SCT has been reported at .94, Loevinger (1996) acknowledges the limitations of the assessment. There is no guarantee that respondents will use their authentic frame of reference when responding to the sentence stems. Further, it has been found that persons typically display ego at various stages and a one-to-one correspondence between judgments and actions is not guaranteed. Finally, there is no error-free way to completely separate cognitive structure thus the use of three domains is necessary.

A means of assessing conceptual/reflective judgment was designed by Hunt and his associates. The PCM (Paragraph Completion Method, 1977) consists of six prompts or paragraph stems to which individuals reply. Stems include, "When I think about rules…" "When I am criticized…" "When I think about parents…" "When someone does not agree with me…" "When I am not sure…" and "When I am told what to do…" Each response generates a score from 0 – 3. An overall score is received by averaging the top three scores from the given responses. Oja and Smulyan (1989) offered the following interpretation of scores: a score of 1 signifies categorical judgments and stereotyped thought, a score of 2 shows more self-delineation, awareness of alternatives, and awareness of emotions, and a score of 3 is characteristic of abstract internal principles and awareness of multiple viewpoints. Most adults exist in the quasi-reflective level (score ranging around 2) of conceptual judgment. Inter-rater reliability for the PCM has been reported from .80 to .95 (Gardiner & Schroder, 1972). Similar to the SCT, the PCM does not provide a guarantee that participants will use their true frame of reference when responding to the prompts and a one-to-one correspondence between judgment and action is not guaranteed. No longitudinal studies of developmental change in reference to conceptual level have been conducted (Hunt, Butler, Noy, Rosser, 1977). Longitudinal evidence is necessary to uphold strong constructive validity for a developmental progression. However, in terms of predictive validity, a review of over 200 studies by Miller (1981), resulted in consistent correlations found between conceptual level and need for structure in learning and instructional environments.

   Actions. Quantitative data on the professional actions of each mentor were collected using an adapted form of the Flanders Interaction Analysis System known as the GIAS (Guided Inquiry Analysis System, Flanders, 1967; Reiman, 1999). Both systems supply a

means by which to estimate "initiative-balance response of classroom interactions" (Flanders, 1970, p. 36). In the case of this study, the GIAS was used to measure interaction during conferences conducted between the mentor and the beginning teacher. The system is illustrated in Appendix E and consists of three categories: direct mentor interaction, indirect mentor interaction, and beginning teacher talk. Research has shown that mentors using less direct and more indirect styles of coaching were able to hold more learner-centered conferences in which the beginning teacher was able to express more feelings, engage in deeper analysis of instruction, and become more independent in solving classroom dilemmas (Reiman & Watson, 1999). The use of assessments such as the Flanders and the GIAS declined when adoptions of statewide teacher appraisal systems emerged based on scripted data and process-product research. Critics maintained that Flanders was not able to distinguish between more specific behaviors such as types of questions, something the GIAS has accommodated. Recent research does suggest that teachers using more indirective styles of instruction saw an increase in student learning (Rosenshine & Meister, 1994; Wang, Haertel, & Walberg, 1993). Although parallels to the field of mentoring are apparent, research in this area is scare.

Qualitative Data

Qualitative data were gathered from two cycles of mentor assistance, a demonstration and an observation cycle, conducted by each mentor with his/her beginning teacher. A cycle of assistance was composed of three steps taken by the dyad: (1) identifying a teaching behavior focus on which the beginning teacher would like to work (i.e., positive reinforcement, lesson planning, etc.); (2) engaging in discussion and mentor demonstration of the behavior which included a pre- and post-conference before the demonstration; and (3)

conducting pre- and post-observation conferences around the beginning teacher's utilization of the behavior. Observations of conferences with the beginning teacher, observations of lessons by the beginning teacher, analysis of artifacts asking the mentor to self-analyze and reflect on his or her role, and interview data with the mentor and beginning teacher were collected, transcribed, and coded for judgments and actions. The qualitative data were coded according to a list of indicators or "decision rules" (Miles & Huberman, 1984, p. 246) for each theoretical domain (moral/ethical, conceptual, and ego). As illustrated in Table 4.1, an overview of the moral/ethical coding matrix is derived from general trends in the literature (Yin, 2003). A complete matrix for each domain is included in Appendices P - R.

Table 4.1: Overview of Coding Matrix for the Moral/Ethical Domain

	Judgment	**Action**
Personal Interest Schema	Personal stake in outcome	Made without considering others
Maintaining Norms Schema	Rules and norms apply to everyone	Made out of respect for social system
Postconventional Schema	Norms are relative; there are idealized ways in which persons should interact	Ideals are shared, scrutinized, and constantly reevaluated

As seen in Table 4.1, the personal interest schema represents a decision maker's primary concern only with his or her own stake in terms of outcomes (Rest, *et al.,* 1999). This schema can be disaggregated into a judgment category and an action category for teachers and/or mentors as reflected by the top row of Table 4.1. Judgments within the personal interest schema are made based upon self-interests only. Problems are perceived as external to the self. Corresponding actions include teacher or mentors predominately employing instructional strategies regardless of the needs of learners. As persons move down the vertical column of Table 4.1, an increase in complexity occurs as represented by

the maintaining norms and postconventional categories. For example, at the postconventional level there is recognition of others in terms of cooperation and a realization that social norms are situational and must be open to scrutiny.

A similar matrix was designed for the conceptual domain as seen in Table 4.2. Across the horizontal axis, there are actions connected to judgments determined by the theoretical conceptualization and corresponding studies (Miller, 1981; O'Keefe & Johnston, 1989; King & Kitchener, 1994).

Table 4.2: Overview of Coding Matrix for the Conceptual Domain

	Judgment	Action
Pre-Reflective	Values high structured environments and views knowledge as fixed	Adherence to set norms and proven methods of instruction/coaching
Quasi-Reflective	Some tolerance for ambiguity with justifications that fit personal, established beliefs	Engages in imitation of instructional methods with some sensitivity to the needs of learners
Reflective	Critical evaluation of evidence as part of decision-making process	Able to "read and flex" with the needs of learners and consistently reevaluates instructional decisions

Differentiation between the categories in Table 4.2 occurs mainly in the ability to employ a variation of teaching methods and instructional strategies based upon a deep understanding of the impact on learners. As persons move down the vertical axis of the matrix, an increase in tolerance and less need for structure is apparent as represented in the quasi-reflective and reflective categories. Table 4.2 shows how teachers or mentors at more complex levels (reflective judgment and action) display more flexibility in adjusting to the needs of learners based upon evaluating evidence from a variety of sources.

Last, Table 4.3 illustrates a summary matrix for the ego domain. The premise of the ego being that as complexity increases (down the vertical axis) so does one's ability to be self-aware and consider others' perspectives when making decisions.

Table 4.3: **Overview of Coding Matrix for the Ego Domain**

	Judgment	**Action**
Pre-conventional	Has a need to minimize controversy and change with little openness to learner perspective	Impulsive and self-protective with minimal involvement with the perspective of others - controlling
Conventional	Feels responsible for learners and an obligation to prevent them from making mistakes	Predicated by need for acceptance and acceptability
Post-conventional	Recognizes need for learners to construct knowledge independently and views mistakes as part of the learning process	Provides more latitude in learning experiences and engages in mutual evaluation

Actions correspond to judgments across the horizontal axis of Table 4.3 and are basically actualizations of how interpersonal experiences are integrated with the intrapersonal. For example as shown from left to right across the matrix, persons at a pre-conventional level of ego will make judgments based on a need to minimize controversy, which can be seen in a strict adherence to state curriculum with little acknowledgment of learner perspective or foundational skills. As complexity increases, actions are based more upon norms that are chosen and evaluated by the individual shown in the conventional and post-conventional categories of Table 4.3. An increased sensitivity towards the needs of the self and others is apparent as those in the postconventional category engage in and challenge others to learn through discovery.

Although the matrices are based on three separate domains of cognitive development, they share common characteristics including delineation of categories of less to more complex reasoning (vertical axis) and a premise that actions are related to underlying

judgments (horizontal axis). To test the reliability of the matrices, two raters trained in both

theories of adult development as well as processes of mentoring, supervision, and effective

teaching coded the data independently (based on completed matrices located in Appendices P

- R). Inter-rater reliability was calculated by comparing coding that was the same by the two

raters to the total number or results. Reliability was found at a .73 level of consistency.

Data Analysis

The qualitative data were compared to the quantitative assessments of judgment

(DIT-2, SCT, and PCM) and action (GIAS). Investigation into the convergence and

divergence of judgments and actions for each domain was then conducted.   Analysis of such

patterns is a system known as pattern matching illustrated in Appendix A. It can include

observed patterns with theoretical ones and judgment patterns with actions. Its use greatly

increases the validity of case study methodology (Campbell, 1975; Trochim, 1989). Trochim

(1989) explained that a theory "postulates structural relationships between key constructs"

for which predicted values can be generated (p. 356). The bottom portion of the figure

represents the observational realm directing the investigation "in the form of impressions,

field notes, and the like, as well as more formal objective measures" (p. 356). Collection of

data is organized and recorded as indicated by the bottom oval. Finally, the researcher has

the inferential task of finding points of convergence or divergence between the predicted and

observed patterns.

Results

The following section presents results in terms of the three cognitive domains:

moral/ethical, ego, and conceptual. Each section begins with an overview of findings for the

particular construct. This is followed by an examination of how the theoretical patterns of

judgment converged with patterns that were observed. Finally, trends in mentor action are

presented and analyzed according to congruence with mentor judgment.

Moral/Ethical Domain

The moral/ethical domain consists of three schemas: personal interest, maintaining

norms, and postconventional reasoning. These schemas describe how one's cognitive

structures shape decisions and reasoning about issues such as social justice and fairness.

Results are presented in terms of how often a particular schema was used in responding to

statements about moral dilemmas. Table 4.4 shows these results and other findings in the

moral/ethical domain for each participant. It begins with a report from the DIT-2 on the

distribution of use of the three schemas. This is followed by an overview of the findings

from the matrix in which data gathered through interviews and artifact analysis (i.e., written

self-reflection and analysis) was coded. The fourth column of Table 4.4 reports findings

from the GIAS taken as an average of four conferences (pre- and post-conference for the

demonstration cycle and pre- and post-conferences for the observation cycle). The data are

reported in terms of two categories: direct versus indirect interaction and mentor versus

mentee talk. Finally, the last column in table 4.4 illustrates results from the application of the

coding matrix for moral/ethical actions. Data for this column was gathered by observing pre-

and post-conferences for both the demonstration and observation cycles as well as examining

mentor self-reflection and analysis.

Table 4.4: Summary of Findings in the Moral/Ethical Domain

Mentor	Standardized Measure (Schema Distribution)			Findings from Application of Matrix (Judgment)	GIAS Assessment from Mentor/Beginning Teacher Conferences				Findings from Application of Matrix (Action)
	Post-Conventional	Maintaining Norms	Personal Interest		Direct Interaction	Indirect Interaction	Mentor Talk	Mentee Talk	
Logan	.58	.14	.16	Adheres to moral ideals Open to conflicting viewpoints Concerned about learner rights	.56	.44	.62	.38	Allowed beliefs to be debated Presented data in a non-judgmental format Based reflections upon learner needs
Linda	.46	.34	.20	Norms necessary for relationships Uphold school procedures Considered benefits and consequences of choices for mentor action	.63	.37	.65	.35	Focused on own viewpoint with some input from mentee Allowed own strategies to be scrutinized Based reflections on benefits for self
Thomas	.28	.32	.38	Emphasized personal stake Goals made from self-perspective only Saw problems as having only one solution Viewed norms as contextual	.67	.33	.69	.31	Geared conferences towards own goals Conducted observations with little regard to mentee perspective Acknowledged need to improve listening skills

Convergence Between Theoretical and Observed Patterns

As seen in Table 4.4, differences existed in the primary schema each mentor used for reasoning about moral/ethical issues as reported by the DIT-2. Logan and Linda both tended to use the postconventional schema although Logan's use was more consistent. Thomas' most prominently used schema was that of personal interest, yet evidence of maintaining norms and even postconventional reasoning was also reported. From this data one would expect Logan to display judgments that question established norms. According to the theory, she would be interested in various perspectives and place value in assistance that is given in an unbiased manner. These characteristics can also apply to Linda however, as seen in Table 4.4, she also reported a significant use of the maintaining norms schema. This insinuates a

need to adhere to established rules and procedures such as those that exist in a school hierarchy (i.e., principal over teacher, teacher over students). Finally, Thomas may show signs of both of these schemas although the personal interest emerged as most prominent as shown in Table 4.4. Predictions for Thomas include making judgments that are mainly self-centered. If problems exist Thomas may be reluctant to accept responsibility and view only one solution as appropriate.

Convergence existed between these theoretical patterns and the observed patterns illustrated in the second column of Table 4.4. Logan made judgments that were representative of her moral ideals. For example, she consistently recognized and considered her mentee's rights as a learner. "I'm not in her classroom all the time…there's nuances to it that being a teacher I feel like I know [but others] you just don't know when you're not in someone else's classroom" (Logan, Follow-Up Interview, lines 209-213, December, 2003). Logan stressed the need to be "nonjudgmental and straightforward" and not make any "value judgments", but to be objective when gathering data. She was able to judge the benefits and consequences of such:

> I really want to make sure I give her feedback that is accurate and based on what I saw and not based on what I think…there's nothing wrong with saying half your class isn't paying attention, but now when I've looked at it more, yes there is in that you're not saying half your class was paying attention (Logan, Initial Interview, lines 40-45, November 2003).

As seen in Table 4.4, Linda was able to show similar judgments such as considering how having the same planning period with her mentee as being beneficial versus problematic, "I think if we had different planning periods it would be better for me to

observe him. But, the positive side is by having the same planning time, I was able to conference with him during that time" (Linda, Follow-Up Interview, lines 60-66, December, 2003). However, trends in her judgments were towards maintaining the norms of mentoring according to her school structure. "I am becoming aware of what an administrator looks for in an effective teacher and a classroom" (Linda, Self-Assessment #14, November, 2003).

Finally, as reported in Table 4.4, Thomas tended to use the personal interest schema as a basis for his judgments. He was very concerned with "doing it right the first time" (Thomas, Initial Interview, line 85, November 2003). Thomas focused his concerns on his personal stake in being a mentor. "Overall if I had to give it a grade I would give it a B maybe a B+" (Thomas, Follow-Up Interview, line 37, December, 2003). He wanted to provide his mentee with information to "make her understand that it's tough being a teacher the first year" (Thomas, Initial Interview, lines 89-90, November 2003). Thomas saw himself as an authority on classroom climate and teacher behavior and interpreted many of Susan's concerns through this lens. He viewed her problems with classroom management as having had one solution - how she presented herself to students.

> That's something that's always worked in my room [using nonverbal cues] and I've never had a problem with that. So, I feel good that that's our coaching plan, that she's focused on that…I help her with the support I think she needs because that's what we're being trained in (Thomas, Initial Interview, lines 50-52, November, 2003).

Although management was a concern for Susan, this is not the focus on which she wanted to work, however Thomas thought it was most appropriate.

As seen in columns one and two of Table 4.4, there was significant convergence between the standard assessment of moral/ethical judgment and that gathered by the coding matrix for all three participants.

Congruence of Judgments and Actions

The fourth column of Table 4.4 reports results from the GIAS averaged across four conferences: pre- and post-conferences for the demonstration cycle and pre- and post-conferences for the observation cycle. For Logan, a ratio of 56% to 44% direct to indirect interaction was reported along with 62% to 38% mentor to mentee talk. This indicates that while Logan did over half of the talking during the conferences, about half of the time she was employing indirect strategies such as accepting beginning teacher feelings and ideas, reinforcing, or prompting inquiry. According to Table 4.4, Linda had similar ratios of mentor/mentee talk (65% to 35%), although the ratio of direct interaction was higher, 63% to 37%. This is indicative of more time being spent by Linda providing her mentee with information or giving direction. Finally, results for Thomas in Table 4.4 show a higher percentage of mentor talk at 69%. Direct interaction was also higher at 67%. Thomas talked for over two-thirds of the conference time with a majority of the verbal behavior being to provide information.

Significant trends were apparent between data gathered by the GIAS and the standard assessment of moral/ethical judgment. As seen in Table 4.5, a focus on these two components illustrates emerging patterns of judgment and action.

Table 4.5: **Comparison of DIT-2 and GIAS**

Mentor	DIT-2 (Postconventional Reasoning)	Direct Interactions	Indirect Interactions	Mentor Talk	Mentee Talk
Logan	**58%**	**56%**	44%	**62%**	38%
Linda	**46%**	**63%**	37%	**65%**	35%
Thomas	**28%**	**67%**	33%	**69%**	31%

According to the DIT-2, Logan used 58% postconventional reasoning, Linda used 46%, and Thomas used 28%. As these percentages decrease, the amount of direct interaction for the participants increased (Logan - 56%, Linda - 63%, and Thomas - 67%) as well as the amount of mentor talk (Logan - 62%, Linda -65%, and Thomas - 69%). As seen in Table 4.5, the inverse relationship can be applied to all categories. As the percentages of mentor postconventional reasoning increase, the beginning teacher becomes more engaged in the conference through the sharing of self-assessment and reflection. For example, Logan's percentage of postconventional reasoning was 58. The percentage of time allotted for her mentee to talk was 38%. This is compared to the 31% for Thomas who's postconventional reasoning was only 28%. These findings indicate that these mentors who were more open to question and debate about established rules and norms, engaged in more indirect behaviors such as accepting ideas and prompting inquiry versus providing information and direction. This, in turn, afforded the opportunity for the mentee to participate more actively in the conference by sharing self-analysis and reflection.

Use of the coding matrix resulted in similar findings as seen in the last column of Table 4.4. Mentors using higher levels of postconventional reasoning were more open to

various viewpoints and engaged in a deeper reflection of their mentor behaviors. For example, Logan was open to debate and question of evidence she had gathered during lessons. When she presented her mentee with information regarding a student using another student's notes, her mentee responded, "...he's a unique learner and he's dyslexic so he doesn't get to take notes..." Logan then adjusted her stance, "So that is obviously a special situation that you're aware of and the student's aware" (Logan, Observation Post-Conference, lines 73-74, November, 2003). Logan also shared evidence with her mentee that was non-judgmental and unbiased converging with the data gathered on her judgments. One case in point occurred when she was providing information on whether or not her mentee's classroom management supported the learning outcomes. Logan decided to use a "focus check" at three times ("25 out of 29 students were focused" on the given task) during the lesson to provide Sherry with a more objective measure. Linda was also able to consider the perspective of her mentee and engaged in debate about her own style of teaching, "What I gather from you is using the chart may not work for you because it slows you down in your lesson. Maybe we need to discuss ways of incorporating them [higher order questions] without using the chart" (Linda, Observation Post-Conference, lines 147-150, December 2003). However, congruent with maintaining norms, Linda spent a great deal of time presenting her mentee with her own perspective on the lesson through both objective ("You asked questions like, 'Why do we paraphrase") and subjective statements ("I've was very impressed with your lesson"). Linda even went so far as to counteract Joseph's self-analysis.

Mentee: Well, management wise I feel they did what I said and it was fine…I feel like the students enjoy the class more than they gave off today…

Linda: You really feel your classroom is running smooth…One thing I

                disagree with you on is I really felt like they were excited about this

                (Linda, Observation Post-Conference, lines 245-246, December,

                2003).

As seen in the above interaction, Linda does accept and acknowledge her mentee's

perspective, but views her own as more of an authority on the subject of student

participation. Finally, as seen in Table 4.4, Thomas' actions tended to be more congruent

with the use of a personal interest schema focusing on goals he had for Susan versus her

using her perspective.

Thomas: Do you want to do nonverbal cues? Do you want to do circulating

                around the room? Do you want to do a little bit of positive

                reinforcement with the kids?

Mentee: Um, I'm really looking for equity.

[Later in the conference.]

Thomas: I'm going to give you some tactics today that I think will address that

                issue and help you out with that, but there's something else oh, moving

                around the room and reinforcement, verbal and nonverbal cues

                (Thomas, Demonstration Pre-Conference, lines 16-26; 32-33,

                November, 2003).

During this exchange, it was obvious Susan wanted to work on equity, however Thomas

continued to stress the nonverbal behaviors he felt needed work. This was carried into the

second observation cycle in which Thomas used an observation form to record behaviors

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such as nonverbal actions and reinforcement when Susan wanted to focus on equity (Thomas, Artifact #4, December 2003).

Convergence existed across all spectrums of the moral/ethical domain. Theoretical, predicted patterns matched those that were observed and measures of judgments were congruent with data gathered on actions. As mentors utilized more complex schemas of judgment, their actions displayed an ability to consider multiple perspectives, to be more open to debate, and to show greater concern for the rights of learners.

Ego Domain

The ego domain describes one's ability to integrate self-understanding with knowledge about others. As the executive of cognitive function, the ego provides a structured frame of reference for making decisions. As Loevinger's original theory postulated, ego can be measured using a Sentence Completion Test and summarized in three categories (Hy & Loevinger, 1996). For this study, the three categories include pre-conventional (levels 1-3), conventional (levels 4-6), and postconventional (levels 7-8). Table 4.6 summarizes findings in the ego domain beginning with results from the SCT. This is followed by findings from the coding matrix for ego gathered from interviews and artifact analysis revolving around a demonstration and observation cycle. The fourth and fifth columns of Table 4.6 illustrate findings for action in the ego domain. The GIAS data is presented first and represents an average of the direct/indirect interactions and mentor/mentee talk for the pre- and post-conferences of both cycles. Finally, qualitative data gathered from observations of conferences, interviews, and artifacts including written self-reflection/analysis are summarized in the last column of Table 4.6.

Table 4.6: **Summary of Findings in the Ego Domain**

Mentor	Standardized Measure (Ego Distribution)	Findings from Application of Matrix (Judgment)	GIAS Assessment from Mentor/Beginning Teacher Conferences				Findings from Application of Matrix (Action)
			Direct Interactions	Indirect Interactions	Mentor Talk	Mentee Talk	
Logan	Late Conventional (Level 6) (Conscientious)	Considered mentee perspective Self-aware and self-critical Viewed self as responsible for mentee learning	.56	.44	.62	.38	Simple emotions used during interactions with mentee Free flow of emotion in written reflections Interested in growth in multiple roles
Linda	Early Postconventional (Level 7) (Individualistic)	Concerned with appearance Valued niceness - did not want to be critical Considered mentee perspective	.63	.37	.65	.35	Specific emotions used during interactions with mentee Difficulty identifying concerns Consistent use of praise and reinforcement
Thomas	Late Conventional (Level 6) (Conscientious)	Judgments based on conventional stereotypes Concerned with appearance Some consideration of mentee emotion	.67	.33	.69	.31	Controlling Expressed emotion in one-dimensional terms Recognized minimal need for change Oriented towards goals

Convergence Between Theoretical and Observed Patterns

Table 4.6 shows all three participants existing at similar levels of ego judgment as measured by the SCT. At late-conventional, early postconventional levels such as these, individuals are aware of and consider the perspective of others while maintaining goals for continued self-growth. A certain amount of empathy exists when making decisions. Movement to early stages of postconventional ego as shown by Linda is characterized by the ability to assume multiple perspectives. Individuals become very specific about their emotions and are better able to reconcile conflicting emotions. According to Table 4.6, Logan and Thomas were both assessed as being at a late conventional level while Linda was

characterized as moving into a more postconventional level. Keeping in mind that rarely does a person exist primarily in one level of ego, certain aspects of the observed patterns (found in column three of Table 4.6) were convergent with the SCT while others were more divergent.

Convergence. First, all three participants showed evidence of taking their mentee's perspective into account as shown in Table 4.6. For example, Thomas acknowledged concerns his mentee had about balancing work and family, "I know she gets frustrated, she has kids of her own and she's concerned about that" (Thomas, Follow-Up Interview, lines 199-200, December, 2003). Linda wanted to be sure and address behaviors on which her mentee wanted to focus and Logan noted wanting to "focus on one teacher behavior focus at a time, not to overwhelm new teachers" (Logan, Self-Reflection #11, December, 2003). Being in a late conventional stage, Logan also made judgments that were evident of building self-awareness and being self-critical. "I'm still nervous about making sure I do things right…I felt a little unsure of myself like maybe I was making too many suggestions for change" (Logan, Follow-Up Interview, lines 95-96, December, 2003). Linda and Thomas seemed to exhibit similar judgments of self-awareness such as being nervous about performing in front of peers for a demonstration lesson.

Divergence. Again, very rarely do individuals make judgments that are consolidated within one level of ego. However, some judgments made by the participants were significantly uncharacteristic of their assessed judgment level illustrated in Table 4.6. For example, Thomas tended to base some judgments in conventional stereotypes. "I'm not from this area so it's interesting to see teachers that are from here…I think they have less patience than myself" (Thomas, Follow-Up Interview, lines 308-311, December, 2003). He

commented, "New teachers are overwhelmed by their workload and need a good structure from day one" (Thomas, Self-Reflection #13, December, 2003). This indicates a lack of awareness of individual differences characteristic of an early conventional ego level. Linda also made judgments that were less complex than suggested by the SCT. For example, in regard to providing her mentee with feedback, she focused on being nice and not appearing critical. "I'm good at giving praise, but I didn't want it to seem that I was being harsh or just out to get him by telling him, well you need to do this or try it this way, it might help" (Linda, Follow-Up Interview, lines 38-43, December, 2003). Even in her written reflections, Linda was concerned about hurting her mentee's feelings or "discouraging him" by "appearing critical" (Linda, Self-Assessment #2, December, 2003).

Congruence of Judgments and Actions

Column four in Table 4.6 reports the findings for the GIAS in terms of direct/indirect interaction and mentor/mentee talk. As with the moral/ethical domain, one would expect trends in the data to exist. For example, as the level of ego reasoning increased, the amount of direct interaction and mentor talk should decrease. However, as seen in Table 4.7, this was not true for the ego domain.

Table 4.7: **Comparison of SCT and GIAS**

Mentor	SCT	Direct Interactions	Indirect Interactions	Mentor Talk	Mentee Talk
Logan	**Late-Conventional Level 6**	**56%**	44%	**62%**	38%
Linda	**Early Postconventional Level 7**	**63%**	37%	**65%**	35%
Thomas	**Late-Conventional Level 6**	**67%**	33%	**69%**	31%

Table 4.7 shows inconsistency in patterns of interaction and amount of mentor talk when compared to the SCT data. Logan and Thomas were assessed at similar judgment levels, however a ten percent difference existed in their interactions. Logan allowed more time for her mentee to give her perspective (mentee talk at 38%) and engaged in more indirect interactions (40%) such as accepting and using her mentee's ideas. Thomas however, was more apt to present information from his own perspective as shown by the 67% direct interaction, 69% mentor talk. Linda, assessed at an early postconventional level, averaged 65% mentor talk and engaged in direct interactions with her mentee for an average of 63% of the time. This included presenting him with information based in evidence and data as well as giving her own thoughts and feelings regarding the teaching episode. Data gathered by the coding matrix shown in Figure 4.6 may help to explain the lack of consistent trends within the ego domain. Linda's judgments revealed a concern with being critical. Her actions displayed a desire to be nice and praise her mentee with phrases such as, "I really felt like they were excited about it", "I really enjoyed it", and "I was really impressed with your lesson" (Linda, Observation Post-Conference, December 2003). Such additions may have added to the level of mentor talk recorded by the GIAS.   However, congruent with an early postconventional level, Linda's actions revealed self-awareness of her mentoring behaviors, "I feel that I do a great job of paraphrasing content, but I have a difficult time incorporating the use of 'tell me more' openers. I want to encourage the beginning teacher to tell more about his feelings" (Linda, Self-Assessment #9, December 2003). In terms of Logan, actions were also congruent with her judgments. During conferences with her mentee, Logan expressed emotion that was one-dimensional (i.e., "happy", "bad", "glad"). This may

explain the smaller percentage of teacher talk recorded by the GIAS. During written reflections, Logan's expression of emotion was much more specific, rich, and diverse.

> I have been apprehensive, excited, stressed, and relieved. Early on, I was wondering what I had gotten myself into and if I was going to be an effective mentor. I have been impressed by the research and demonstrations. I was excited to put them to work in my class and with my mentee…I have been amazed that the cycle was not harder than it was. I enjoyed the experience (Logan, Self-Reflection #11, December 2003).

As seen in the passage, Logan was aware of and able to reconcile conflicted emotions. The difference in expression of emotion (present versus past situations) is characteristic of late conventional ego. Similar trends were seen in Thomas' actions. Throughout the conferences and interviews, Thomas was able to express some emotion although it tended to be simple and often one-dimensional such as "I'm a little nervous about it" and "...anxious to get it done to see how we did" (Thomas, Follow-Up Interview, lines 53-54; 346-365, December 2003). From another perspective Thomas noted, "I feel pretty good about it, like I said, a little nervous" (Thomas, Demonstration Post-Conference, lines 102-104, November 2003). Again, this is characteristic of the conventional ego level.

As seen in Table 4.6, both convergence and divergence existed in the ego domain in terms of the theoretical/predicted patterns and judgments and actions. Where participants were assessed to be at similar levels of ego, their judgments and actions could not necessarily be consolidated within a single category.

Conceptual Domain

Conceptual judgment describes an individual's preferred style of identifying, reasoning, and reflecting on ill-structured problems. Assessed by the PCM, a person's conceptual judgment results in one of three levels: pre-reflective, quasi-reflective, or reflective. Summary of findings in the conceptual domain are presented in Table 4.8. As seen in the table, an overview of results from the PCM as a standardized measure of conceptual judgment is given first. This is followed by findings from the coding matrix (gathered through interviews and artifact analysis). Columns four and five then provide an overview of conceptual action as gathered first by the GIAS and then by applying the coding matrix. The GIAS presents average percentages of direct/indirect interactions and mentor/mentee talk for four conferences (pre- and post-conferences for a demonstration and observation cycle). The coding matrix summarizes data gathered through observations of pre- and post-conferences for a demonstration and observation cycle as well as artifact analysis. Trends in Table 4.8 will be examined in terms of theoretical/observed patterns and congruence between judgment and action.

Table 4.8: **Summary of Findings in the Conceptual Domain**

Mentor	Standardized Measure (Conceptual Distribution)	Findings from Application of Matrix (Judgment)	GIAS Assessment from Mentor/Beginning Teacher Conferences				Findings from Application of Matrix (Action)
			Direct Interactions	Indirect Interactions	Mentor Talk	Mentee Talk	
Logan	Level 2.5 Reflective	Considered various sources of evidence Acknowledged viewpoint of learner Stressed importance of presenting objective criteria	.56	.44	.62	.38	Presented mentee with objective data Re-evaluated evidence when presented with new information Prompted mentee to synthesize and evaluate
Linda	Level 2.0 Quasi-Reflective	Displayed a need to maintain structure and reduce ambiguity Considered multiple perspectives that exist in school climate Maintained self as an authority	.63	.37	.65	.35	Justified beliefs and actions of others Not able to recognize mentee's need for high structure Prompted mentee to synthesize and evaluate
Thomas	Level 2.3 Emerging Reflective	High value in structure Concerned with external approval Acknowledged information could be gathered from different sources	.67	.33	.69	.31	Conferences lacked in-depth analysis Presented self as an authority Engaged in reflecting on mentee's emotional state Some evidence of self-directed learning

Convergence Between Theoretical and Observed Patterns

As seen in Table 4.8 some difference existed in the standardized measure for

conceptual judgment. Reported by the PCM, judgments made by Linda were considered

quasi-reflective while Thomas and Logan's judgments were more reflective. It is important

to note, however, that while Thomas and Logan were both considered reflective, Thomas'

score of 2.3 shown in Table 4.8 indicates emerging reflective judgments and Logan's score of

2.5 represents more consolidation within the reflective level. The reflective level of

conceptual judgment consists of an ability to think abstractly coupled with a growing

tolerance for ambiguity. One would expect to find individuals at the reflective level able to

integrate various perspectives and consider multiple sources of evidence when making

decisions. Mentors at this level encourage learners to engage in deeper analysis through

higher order questioning. According to the table, both Logan and Thomas would be showing

these characteristics. Those at a more quasi-reflective level are more comfortable with

moderate amounts of structure in teaching and learning environments. There is an increased

ability to consider multiple perspectives and sources of evidence although evaluation of these

sources is lacking. Again, as indicated by Table 4.8, one would predict Linda and possibly

Thomas (considering he was just moving out of the quasi-reflective level) to make these

types of judgments. Column three in Table 4.8 summarizes the main findings from the

coding matrix. These findings provide points of convergence and divergence with the PCM

assessment.

Convergence. As shown by the table, all three participants were able to consider

multiple sources of evidence when making decisions. Thomas acknowledged information

important to his mentee could come from a variety of sources, "The department chair from

her department might give her insights into what's going on in her classroom more so than

what I would" (Thomas, Follow-Up Interview, lines 276-278, December 2003). This

converges with the quasi-reflective judgment level. Similar findings existed for Linda who

was able to consider different viewpoints that may exist in her school.

> Some people may want to see the time used on duty things in the school. We could
>
> help in another situation if we're on duty in the cafeteria monitoring as opposed to
>
> going into [my mentee's] classroom. Also the money – it takes money if we hire

extra people to come in and cover classrooms. That's money that you're taking away

from another program (Linda, Follow-Up Interview, lines 150-157, December 2003).

In addition to being able to consider different viewpoints as important sources of evidence

Linda began to engage in evaluation. However, as indicated by Table 4.8, when making

some judgments regarding teaching and mentoring, Linda maintained a sense of authority

and expertise commenting, "I feel my opinion is better. I have the experience of what has

worked and not worked" (Linda, Follow-Up Interview, lines 135-137, December 2003).

Logan assessed as using reflective judgments, was also able to evaluate sources of evidence.

"It seems like you can find research that supports what you want it to support and numbers

and data to look the way you want it to look" (Logan, Follow-Up Interview, lines 228-230,

December 2003). Through these reflections, Logan stressed the need to collect objective

criteria during observations, "I want to make sure to give her feedback that is accurate and

based on what I saw and not based on what I think" (Logan, Initial Interview, 40-42,

November 2003). As seen in the two quotes by Logan, there was an ability to understand

and acknowledge the subjectivity that can come with collecting and interpreting data.

Divergence. As seen in Table 4.8, there was some divergence between the theoretical

predicted patterns of conceptual judgment and data presented by the coding matrix.

Acknowledging that rarely are cognitive structures restricted to a single level, a noteworthy

divergence emerged. For example, the PCM assessed Thomas at an emerging reflective level

signifying an increased tolerance for ambiguity and preferred low structure environment.

However, the coding matrix indicated Thomas placing a high value in structure. He

appreciated the conference guide as a source of structure for conversations with his mentee.

It's something we've been working on in class and it's important obviously or else it

wouldn't be on there. We have a tendency to get off track so I think it's important to

keep that level of feedback so that we keep a good dialogue and keep it more

instructional-based instead of more personal-based (Thomas, Initial Interview, lines

24-28, November 2003).

This view of structure is more characteristic of the pre-reflective level. He appreciated the

structure for himself as a mentor as well as for new teachers that needed "a good structure

from day one" (Thomas, Self-Reflection #11, December 2003).

Congruence of Judgments and Actions

Columns four and five of Table 4.8 present data collected on conceptual action.

Column four reports quantitative findings gathered from the pre- and post-conferences of the

demonstration and observation cycles. Two categories are shown, direct and indirect

interaction and mentor and mentee talk. In order to investigate possible trends, table 4.9

displays this data along with results from the PCM.

Table 4.9: Comparison of PCM and GIAS

Mentor	SCT	Direct Interactions	Indirect Interactions	Mentor Talk	Mentee Talk
Logan	**Reflective Level 2.5**	**56%**	44%	**62%**	38%
Linda	**Quasi-Reflective Level 2.0**	**63%**	37%	**65%**	35%
Thomas	**Early Reflective Level 2.3**	**67%**	33%	**69%**	31%

According to Table 4.9, Logan and Linda showed trends similar to those seen in the

moral/ethical domain. With an increasing level of conceptual judgment complexity, direct

interaction and amount of mentor talk decrease. For example, Logan talked 62% of the time

allowing her mentee 38% talk time. Logan's talk was represented by a ratio of 56% direct

interaction/44% indirect. This signifies about half of Logan's interactions with her mentee

being behaviors such as accepting and using perspective presented by her mentee, prompting

inquiry, and providing reinforcement. She encouraged her mentee to engage in analysis and

reflection. When her mentee responded, Logan was apt to continue her indirect behavior by

accepting her feelings and analysis and use it to continue the conference. Table 4.9 shows

Linda's percentage of direct interaction and mentor talk slightly higher than Logan's, 63%

and 65% respectively. This adheres to the trend considering Linda's conceptual level is

quasi-reflective versus reflective. One would expect Linda to hold conferences in which the

mentor presents more information in a direct format. Less emphasis is placed on accepting

and using the mentee's feelings and ideas than presenting data that was gathered by the

mentor during an observation. The mentee is encouraged to offer reactions and evidence to

the conference and reinforcement is used. For Thomas, Table 4.9 shows an increase in

mentor talk (69%) and direct interaction (67%), yet his conceptual level is actually more, not

less complex than Linda.   According to the theory, during interactions with his mentee,

Thomas would be interested in acknowledging and using her feelings and ideas as well as

prompting evaluation and synthesis of evidence. Data gathered from the GIAS presented in

Table 4.9 shows a significant portion of interactions with his mentee being mentor directed

affording his mentee only about 31% of the time to respond to questions and initiate talk.

The majority of Thomas' interactions involved presenting his mentee with information that

was rarely based in evidence. Of the 33% indirect interaction, Thomas was able to prompt

inquiry by raising questions as well as provide reinforcement. However, only one instance of

accepting feelings was indicated. This data is supported by the coding matrix for conceptual

action shown in column five of Table 4.8. It consisted of information collected from

observations of conferences, interviews and artifact analysis. Thomas tended to put himself

in an authoritative position when talking with his mentee, "You did everything that I think

you should have done, so that was a good thing" (Thomas, Observation Post-Conference,

lines 62-63, December 2003). When he accepted his mentee's feelings, this prompted her to

provide more information on her emotional state.

> Thomas: So, you're a little nervous, any other feelings?
>
> Susan: I'm not ready. It seems like the more the semester goes on, the less
>
>   prepared I feel (Thomas, Observation Pre-Conference, lines 40-41,
>
>   December 2003).

These types of interactions were rare considering conferences between Thomas and his

mentee only lasted about seven minutes. This afforded little time for his mentee to engage in

and share self-analysis and for Thomas to prompt deeper inquiry. Where this seemed to

match the GIAS data, Thomas' actions were not congruent with the PCM shown in Table 4.9.

Logan however, spent a great deal of time encouraging her mentee to synthesize events with

questions such as, "How would you evaluate the learning outcome?" or "What changes do

you think you would make to the climate?" (Logan, Demonstration Pre-Conference, lines 19-

20, November 2003; Observation Post-Conference, lines 116-117, November 2003). Linda

used similar questions to prompt her mentee to evaluate his teaching, "How did you feel

about the outcome? Did you get the outcome you expected?" (Linda, Observation Post-

Conference, lines 62-63, December 2003). In terms of making decisions in mentoring

situations, Logan was able to use current evidence gathered objectively and consistently

reevaluated. This was evident not only in actual conferences with her mentee, but in self-assessments regarding the conferences. She was prepared to suggest changes for her mentee should her mentee need the structure. This aligns to patterns in her conceptual judgment as well as the ratios presented by the GIAS. Linda was not however, able to recognize her mentee's need for more structured feedback in areas in which improvements could be made. She focused on providing evidence of positive events and even justified student behavior. "It's just that is a higher-order skills that you're teaching them, quotations, paraphrasing is difficult at this age" (Linda, Observation Post-Conference, lines 120-121, December 2003). This seemed frustrating for Linda's mentee who needed more specific feedback in terms of changes he needed to make.

In summary, the theoretical and observed patterns of conceptual judgment showed significant convergence for Logan and Linda. Thomas exhibited judgments that were more congruent with a less complex conceptual level than that reported by the PCM. This impacted trends in the quantitative comparison with actions as well. Thomas' actions measured by the GIAS did not converge with the PCM although they were congruent with the coding matrix for judgment and action.

Results from the study have been presented in terms of three dispositional domains: moral/ethical, ego, and conceptual. Assessment of the convergence between two methods of collecting data revealed similar trends. Congruence was also found between mentor judgments and actions in all three domains. These results and findings will now be discussed in light of past research with an emphasis on the new discoveries emerging from this study.

Discussion

This study examined mentor disposition as professional judgment and action. Although the main questions of the research focused on the congruence between these two components and the influence on beginning teachers, other significant findings emerged. Discussion of the results begins with a summary of the current research in respect to past studies. This is followed by a discussion of the convergence of two methods of assessing professional judgments. Finally, congruence between judgment and action is summarized. Implications for teacher education and professional development are then presented with suggestions for further research. Special emphasis is given throughout the discussion to how the judgments and actions of the mentor influenced his or her relationship with a beginning teacher.

A mentor's disposition has significant influence on beginning teacher development. Mentors exhibiting more complex stages of judgment and action were able to build trusting relationships, be objective while supporting and challenging, and recognized areas of possible growth through self-analysis and reflection. The ability to consider the rights of the beginning teacher as a learner was an important component in all three dyads. This is consistent with prior research. In the study presented by Thies-Sprinthall (1980) supervisors at less complex levels of moral/ethical and conceptual judgment were not able to engage in objective evaluation or provide appropriate levels of support and challenge for their student teachers. However, those supervisors at higher levels of complexity were able to create a more educative environment indicative of teacher development. In this study, mentors with more complex cognitive structures engaged in more discussion about evidence with their mentees, worked to develop a collaborative relationship, and considered various perspectives

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when making decisions. Similar findings existed with the study by Reiman and Watson (1999). Mentors using less directive styles of conferencing and allowing for more mentee talk saw an increase in the mentee ability to discover resolutions to classroom dilemmas independently. Similar findings hold true for this study. For example, as Thomas decreased his amount of mentor talk and directive conferencing, Susan's talk increased and she was able to express more ideas and emotion about her teaching. Linda recognized the need to use "door openers" to encourage Joseph to reflect and analyze on his teaching. Finally, Logan allowed Sherry to give her perspective on various components of the lesson giving Sherry a sense of comfort and independence in terms of evolving as a classroom manager.

What the past research has not addressed is the congruence between theoretical and observed patterns and mentor judgments and actions. Evidence gathered through interviews, observations of conferences, and self-assessment and reflection proved especially valuable in answering these questions. First, an overall convergence existed between the theoretical patterns predicted by the standard measures of judgment and observed patterns summarized through the application of a coding matrix. As Loevinger (1977) noted, rarely do individuals exist in one consolidated ego level. In cases where divergence occurred, it seemed consistent within a single participant. Thomas' ego (conventional) and conceptual judgment (emerging reflective) were reported significantly higher on the quantitative assessment than what was actually gathered through interviews, observations, and artifact analysis. He was not able to empathize with and respond to the emotional and instructional needs of his mentee as the theory suggested. One might question why Thomas' moral/ethical assessment did not diverge, as did the other domains. Lee and Snarey (1988) offer a possible reason. In their study of the ego and moral/ethical domains, it was discovered that development in the ego

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domain was necessary, but not sufficient for moral/ethical growth. Before an individual can develop to a stage of postconventional moral reasoning, he or she must become self-actualized as a person. Continuing with the same argument, it could be said that to become self-actualized as a person, you must have interpersonal maturity. Thus, conceptual judgment is necessary, but not sufficient from ego judgment. Another possible explanation lies in the idea that Thomas was in a transitional state of moral/ethical judgment using all three schemas to make decisions. The lack of consolidation within one particular stage can signal a shift from a less to more complex stage (Rest, *et al*., 2000). While these theories may assist in explaining Thomas' divergence, other cases existed that do not hold true to the theory. For example, in the case of Linda, her conceptual judgment (quasi-reflective) was actually assessed as being less complex than her ego judgment (postconventional), yet she was at a postconventional stage of moral judgment. In essence, the three domains of judgment need be examined as separate, but related entities of disposition. Where an individual may be able to reconcile conflicting emotions and accept various perspectives, he or she may not make judgments based upon moral/ethical ideals and vice versa. In addition, standardized measures are reliable and valid in measuring psychological systems however, the coding matrices played a significant role in assessing judgments within the specific context and complex new role of mentoring.

The main purpose of the research was to examine the congruence between mentor judgment and action. In reference to assessing professional actions, the GIAS proved reliable in assessing interactions during conferences between the mentor and beginning teacher. Application of the coding matrices provided supporting evidence for the GIAS. Actions assessed by the GIAS and the coding matrices provided significant data as to

whether mentors were directive presenters of information or more facilitative in nature

prompting the beginning teacher to be more self-reflective and independent. When this data

was compared to the mentor judgments, significant congruence was found, especially

between the coding matrices and the GIAS. Where divergence existed in the standardized

measure of judgment and the coding matrix, actions were congruent with the coding matrix.

For example, Linda was assessed as being postconventional by the SCT however, the coding

matrix assessed Linda's judgments as more conventional. Actions measured by the GIAS

and the coding matrices were congruent with this assessment. Linda had a difficult time

presenting her mentee with objective data. She wanted to focus only on positive aspects so

her mentee would not think she was being critical. However, what her mentee desired was

specific feedback in suggested areas of improvement. Overall, strong congruence existed

between both judgment measures and mentor actions. In reference to the moral/ethical

domain, as the percentage of postconventional reasoning increased, mentors showed actions

that adhered to moral ideals, were open to questions and debate, and were resolved to

consider the rights of the beginning teacher when making decisions. The conceptual domain

showed similar trends. As mentors developed more reflective judgments, they were able to

consider and evaluate different viewpoints and other sources of evidence. When engaging in

conferences with the beginning teachers, the mentor actions were more facilitative than

directive (i.e., they spent more time prompting inquiry or accepting beginning teacher

emotion and ideas than providing information or giving direction). Finally, the ego domain

proved the most intricate of the three domains. Trends were difficult to identify although

they hold significant impact on mentor action. Mentors whose judgments were assessed by

the matrix to be more complex were able to identify and reconcile the conflicting emotions

that often accompany a new role. They valued collaboration and viewed the beginning

teacher with whom they worked as a colleague versus a subordinate. Conferences tended to

have more of a balance of mentor and mentee talk considering the mentor valued the ideas

and emotions of the mentee.

Considering a convergence was found between the standardized measures of

judgment and the coding matrices and congruence was apparent between judgment and

action, what impact do these findings have for professional training aimed at developing

effective mentors? First, the dispositions of emerging mentors can be assessed with three

standardized measures. Using such assessments can provide trends across large samples of

teachers or mentors. However, as findings show, the coding matrices proved more specific

in providing descriptive indicators of individual mentor dispositions during certain events

such as the cycles of assistance. Dispositions can be assessed with the matrices or the

standardized measures before and after more extensive developmental programming to

address how dispositions may have changed over time. Recognizing that mentors, just like

new teachers may be in high demand, assessing their disposition provides valuable

information in terms of appropriate matches with beginning teachers. As research by Thies-

Sprinthall (1980) suggested, such matches are crucial in the development of preservice and

beginning teachers. The GIAS was significant in measuring mentor interactions during

conference situations. It can be used to gather evidence on the interactions between mentors

and beginning teachers during conferences. Are the mentors providing sufficient opportunity

for the beginning teacher to engage in self-analysis and reflection? Are the mentors

prompting inquiry and clarifying ideas presented by the beginning teacher to assist the

teachers in becoming independent problem solvers? Again, using the GIAS to assess mentor

action before, during, and after professional development programs will provide descriptive evidence on change in actions that may or may not be occurring.

While further research is necessary in the use of dispositions in teacher education and continued professional development, the first steps have been taken. Use of the coding matrices proved reliable in providing supportive evidence for quantitative measures (DIT-2, SCT, and DIT-2) and descriptive characteristics for each participant. The GIAS was effective in measuring action in conferencing situations. Using larger samples of mentors will provide more evidence on whether or not statistically significant correlations exist between the GIAS as a measure of the action and the PCM, SCT, and DIT-2 as measures of professional judgment. Implementing the coding matrices and the standardized measures into existed mentoring programs will provide further information as to the applicability and practicality of the two assessment pieces. Through continued study, more refined programs of fostering and assessing mentor dispositions will emerge. These programs will see the development of mentors who are more capable of supporting the thousands of new teachers entering the profession and the need for new teachers may eventually decrease.

CHAPTER FIVE - RESULTS AND DISCUSSION OF BEGINNING TEACHER

DISPOSITION

Introduction

William James once said there "is absolutely no guarantee that we shall be good teachers…we must have an additional endowment altogether, a happy tact and ingenuity to tell us what definite things to say and do when the pupil is before us" (Hamachek, 1968, p. 205). Although spoken almost a hundred years ago, James' thoughts resonate through the objectives and standards of teacher training and development programs across the nation. High quality teachers, those that have the judgment and action to assist students in meeting current rigorous standards, are at a premium. Organizations within the education academy agree that students must have teachers with the knowledge, skills, and dispositions to assist all students in learning (NCATE, 2002; Serafini, 2002; NBPTS, 1989). However, knowing that teachers need the knowledge, skills, and dispositions to address the needs of all learners and understanding how to develop and assess such characteristics is significantly different. Where we have defined and catalogued the knowledge and skills of quality teachers, "dispositions" remain an elusive concept with little being done to promote its development (Raths, 2001). In fact, scant research even exists regarding the definition and conceptualization of teacher dispositions.

Three challenges face the integration of dispositional development into teacher education and teacher induction programs: the lack of a clear, concise definition grounded in a theoretical framework; the absence of evidence regarding connecting professional judgments and professional actions; and the need for specific descriptions of programs aimed at the development of effective dispositions.

This study addressed these challenges in the context of beginning teacher judgment and action within a theoretical framework of adult cognitive development. Case study methodology was used to explore the congruence between a beginning teacher's professional judgment and his/her professional action while engaged in deliberate psychological and professional education. Analyses were conducted in terms of how the teacher's disposition influences the interactions with diverse learners. Implications for teacher education and teacher induction programs were made.

The research was guided by the following questions:

How does the professional judgment of beginning teachers correspond to their professional action as they address the needs of diverse learners?

How do these professional judgments and actions influence interactions with diverse learners?

Theoretical Framework

Defining Dispositions

Definitions of disposition found in standards governing accreditation of teacher education programs remain "fuzzy" and "confusing" to many college professors and teachers alike (Johnson, 2003). However, much can be learned from Lee Shulman's work (1998) of the shared characteristics between teaching and other professions. Acknowledging over a century of scholarly thinking, Shulman first noted that teaching was built on cognitive constructs in the moral and reflective domains (Dewey, 1904; Mentkowski & Associates, 2000; Oser, Dick, & Patry, 1992). Second, he described disposition as being both an action and an underlying judgment. Current standards however, have chosen to define disposition

as a multitude of constructs including beliefs, values, and attitudes (NCATE, 2002). There lacks a theoretical framework to guide development and assessment of disposition.

Recognizing the need to accommodate professional organizations as well as maintain a definition grounded in a framework of cognitive development and judgment and action, Reiman and Johnson (2004) proposed the following definition: Dispositions are attributed characteristics of a teacher that represents a trend of a teacher's *judgments* and *actions* in ill-structured contexts. Further, it is assumed that these dispositions, trends in teacher judgments and actions, develop over time in *deliberate professional education programs*. The theoretical framework of professional judgments and actions is presented in terms of three domains of adult cognitive development.

Adult Cognitive Development

Three dimensions of adult development are examined in this study as domains of professional judgment and action: the moral/ethical, the conceptual, and the ego. Reiman and Thies-Sprinthall described the domains as connected but independent, interacting as a coherent whole represented by Figure 5.1.
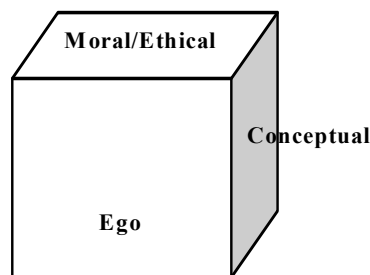
Figure 5.1: Three Dimensions of Adult Development (Adapted from Reiman and Thies-Sprinthall, 1998, p. 43).

The model portrayed in Figure 5.1 illustrates three domains having significant impact on teacher judgment and action in the classroom and beyond. First, the teacher is seen as an epistemologist and instructional manager able to consider various perspectives when solving problems (conceptual domain). Second, the teacher acts as a representative of democratic values and makes judgments based upon principles of social justice and diversity (moral/ethical domain). Finally, the teacher is aware of his or her own system of emotions while being attentive to the needs of others including learners, colleagues, and caregivers (ego domain) (Reiman, 1999; Watson & Reiman, 1999).

The next section illustrates the theoretical frameworks of these three dispositional domains. It is followed by a review of literature summarizing empirical studies connecting the domains to judgments and actions made by teachers.

Moral/Ethical Domain

Neo-Kohlbergian theory was used to interpret teacher construction of understanding of moral/ethical problems presented in the classroom (Rest *et al.*, 1999). Neo-Kohlbergian theory emphasizes, "basic human rights, equal individual moral status, and rational, autonomous individuals who are free to enter into contracts and obligations" and assumes there are various ways of thinking about human rights, some more respectful of human rights than others (Narvaez, 2002, p. 2).

The three-schema conception of moral judgment was employed. A schema is a cognitive structure of the long-term memory that works to facilitate the processing of information (Walker, 2002). It is formed when existing similarities and recurrences of experiences work to interpret new environmental stimulus. Narvaez and Bock (2002) described schemas as the supervisors of decision making and reasoning, acting for the most

part without one's awareness. The integration of schema into the theory of moral judgment acknowledges the presence of other ideologies (i.e. religious or cultural) interacting with moral structures. The theory maintains that these socialized values act in conjunction with deeper cognitive structures versus acting independently. Three schemas have been developed as a way of understanding moral development in a "sociomoral perspective" (Rest, *et al.*, 1999, p. 36).

> First, the *Personal Interest Schema* describes individuals lacking in sociocentric perspective. Decisions are based primarily in the personal stake of the decision-maker stressing notions such as survival and "getting ahead" (Narvaez & Bock, 2002).

> The *Maintaining Norms Schema* signifies an increase in an individual's ability to recognize society-wide cooperation. It emphasizes rules that are clear and consistent applying to everyone. The social system is imperative (i.e., the hierarchical nature of a school) along with maintaining the established norms.

> Finally, the *Postconventional Schema* is based in four specific components (Rest *et al.*, 1999). (a) There is a primacy of moral criteria. Social norms are not set, but are alterable and relative. (b) There is an appeal to an ideal in which idealized ways exist for humans to interrelate. (c) Ideals are both shareable and open to justification and scrutiny. (d) There is recognition of full reciprocity of social norms. Norms must be uniformly applied and unbiased.

Research on moral judgment assessed by the Defining Issues Test spans 25 years and amounts to more than 400 publications. Validity of the assessment has been examined in various criteria including level of education (.30 - .50), which has also been studied

longitudinally resulting in significant gains from the beginning to the end of one's college career. Finally, the DIT has been used to develop a deeper understanding of moral judgment across the professions emphasizing correlations between judgment and action (Bebeau, 2002).

Ego Domain

Ego, according to Jane Loevinger (1976) acts an executive, "a frame of reference that structures one's world" (p. 9). It has been viewed as a construct of personality that works to make sense and integrate intra- and interpersonal experiences in decision-making processes, similar to theories of emotional intelligence. Ego is manifested in one of ten stages: presocial, symbiotic, impulsive, self-protective, conformist, self-aware, conscientious, individualistic, autonomous, and integrated. Adults typically fall within the impulsive to autonomous stages with the modal stage being self-aware. Very few individuals reach the integrated stage; hence very little empirical evidence has been gathered for stage ten. It is important to note however, people can be successful at various stages; higher is not always better, just qualitatively different (Hy & Loevinger, 1996). For the purpose of this study, the levels were compiled into three categories similar to Loevinger's original conceptualization of ego development.

> *Preconventional* – Includes the Impulsive and Self-Protective stages. Adults at this stage may use judgments and show actions that are "opportunistic, deceptive, and preoccupied with control and advantage in relations with other people" (p. 17). Teachers at this stage may lack empathy for their students or colleagues and have a strong need to minimize controversy thus placing blame on others (or external factors) or not recognizing problems in general.

Conventional – Includes the Conformist, Self-Aware, and Conscientious stages.

There is a strong urge at the beginning of the conventional stage to comply with the rules and norms of the group with strong emphasis on respecting authority out of a need to belong. As self-awareness increases, rules and norms remain important, but there is a trend to accept other perspectives and an ability to be self-critical. Teachers at the beginning of the conventional stage tend to view themselves and their students in stereotypical roles. They view learning as adhering to a mandated curriculum focusing on teaching skills versus developing deep understanding (Hy and Loevinger, 1996; Cummings and Murray, 1989). Self-reflection and analysis emerge later in the conventional stage as teachers develop their own standards for achievement (for both themselves and their students) and exhibit a freer expression of emotion.

Postconventional – Includes the Individualistic and Autonomous stages. There is an ability to assume multiple perspectives at the stage. Teachers at more complex levels of postconventional reasoning view education as a process of discovery stressing the importance of mistakes as part of learning (Hy and Loevinger, 1996). There is a pattern of increased sensitivity towards others as well as an interest in self-development in various life roles (i.e., mother, teacher, partner, etc.).

Significant efforts have been made to validate Loevinger's theory of ego development. Thousands of cases have been used to assess both the validity and reliability of the Sentence Completion Test as a measure of ego. The measurement has been employed in clinical studies, education intervention studies, and cross-cultural studies in Japan, Europe, Australia and more (Loevinger, 1998). Although trends are similar across studies, no claims

are made for the universal applicability of the conception of ego development (Loevinger, 1987).

Conceptual/Reflective Domain

David Hunt (1975) devised a theory of conceptual judgment based largely on Piaget's premise of a progression from concrete thinking to cognitive processes that are more abstract. "From a developmental view, conceptual level can be considered in terms of increasing conceptual complexity, increasing interpersonal maturity, and increasing understanding of oneself and others" (p. 222). His findings can be summarized with the three Rs: responsiveness, reciprocity, and reflexivity (Hunt, 1971). The theory, considered an interpersonal maturity model, has had a significant impact on teachers. Hunt postulated that teachers at a higher stage of conceptual judgment were better able to "read and flex" with their students (O'Keefe & Johnston, 1989). This included two distinct characteristics of teachers. First was the ability to "read" cues given by students such as disobedience or misunderstandings. Second, the teacher had to "flex" the communicative approach used in response to the information presented by the student.

Hunt's work inspired Karen Kitchener and Patricia King to study reflective judgment or how persons form judgments about ill-structured problems (King & Kitchener, 1994). They were particularly interested in the justifications persons used to form such judgments. Those at higher levels of reflective judgment are better able to understand and appreciate varied perspectives and can tolerate high levels of ambiguity and frustration.

The conceptual/reflective domain theorized by Hunt and King and Kitchener encompasses three levels:

1. *Pre-Reflective* – This level is characterized by thinking that is concrete. Knowledge is fixed and all problems have a solution. There is a high need for structure at this level with little tolerance for ambiguity.

2. *Quasi-Reflective* – A growing awareness for alternative solutions grows during this level. Individuals are more open to other ideas and perspectives, although there is limited use of such when making decisions. An increased tolerance for ambiguity is evident. This is the modal level for most adults.

3. *Reflective* – Individuals at this level are able to weigh and balance alternative solutions. They value collaboration and are able to synthesize and integrate complex intellectual and interpersonal functions. There is openness to criticism stemming from a belief that judgments made should be open to debate. A high tolerance for ambiguity exists.

As individuals progress from pre-reflective to reflective thinking, they progressively become more tolerant of ill-defined situations and are able to be more self-analytical.

Conceptual/reflective theory has been used in studies sense the mid 1960s. Recent longitudinal and cross-sectional studies by King and Kitchener (1994) indicate a progression of reflective judgment in adults over time. The authors report conceptual/reflective judgment necessary, but not sufficient for moral judgment. Hunt's (1971) research has had significant impact on teacher development in terms of "reading and flexing" with student behavior emphasizing teacher adaptation learner needs.

A theoretical framework for the proposed definition of dispositions was presented. This was followed by an overview of three cognitive structures that have considerable impact

on teaching. The following is a review of available studies integrating the theoretical

framework three domains and teacher development.

Review of Literature

Few studies exist that use a theoretical framework of cognition for teacher

development. Those that have been done provide positive trends in the use of such theory

however, lack specific results regarding congruency between teacher judgment and action.

In an extensive review of literature, Blasi (1980) found over half of the 75 studies examined

report a correlation between moral/ethical judgment and behavior although he stressed the

need to study such associations contextually. In 1981, Alan Miller conducted a similar

review in the conceptual/reflective domain. In a summary of sixty studies, he concluded that

teachers who engaged more complex judgments had a greater ability to adapt to the needs of

students and consider student perspective in terms of classroom work. More specifically,

behaviors included a greater use of nondirective teaching styles and showing more empathy

towards students. Finally, Chang (1994) reviewed research on how the moral judgment of

teachers translated into their conceptions of the classroom. She found those at a higher level

of moral reasoning held more "humanistic-democratic view of student discipline", were able

to consider different viewpoints, held more tolerance for student disturbances, and stressed

student understanding of the purpose of rules (p. 73). Chang also discovered a variation in

how teachers viewed the notion of "on task" and "individualized instruction". As teachers'

moral judgment increased in complexity, these terms became much more specific to the

learner versus the curriculum.

One study reviewed by Chang was a case study of eight teachers by Johnston and

Lubromov (1987). It was discovered that teachers at more principled levels of moral

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reasoning (as measured by the Defining Issues Test) were more apt to be democratic in their methods of discipline (involved students in rule making and promoted understanding of the reason for the rules). Teachers with less complex levels of moral reasoning viewed rules and procedures as a means of maintaining social order. Based mainly on teacher judgments regarding rules, this research implies a connection between approaches to and actions taken regarding the conceptualization of discipline.

MacCullum (1993) discovered similar results. Participants in the higher range of principled reasoning (postconventional schema) approached three out of the four dilemmas presented during interviews from more varied perspectives. They also viewed their role as more facilitative and provided more information and rationale in regards to their decision-making processes.

Reiman and Watson (1999) considered the effects of supervisory behavior on the judgments and actions of beginning teachers. Their results indicated a significant growth in professional judgment as measured in both the moral/ethical and the conceptual domain (assessed by the Defining Issues Test and Paragraph Completion Method, respectively) for teachers whose supervisors utilized a model of deliberate psychological and professional education. In regards to teacher effectiveness, the Flanders Interaction Analysis showed an increase in the percentage of direct instruction (i.e. lecturing, directing, etc.) used by the beginning teachers. However, this was accompanied by an increase in student talk versus teacher talk. According to the authors this may indicate a need of control increasing throughout the school year for beginning teachers. Further investigation into the conferencing style of supervisors showed a dramatic decrease in direct conferencing resulting

in a pattern of using a more learner-centered approach for the mentee who was then able to be more independent in solving problems.

Although the studies reviewed support the use of a theoretical framework centered on adult cognitive development, further examination as to how individual levels of judgment affect the way in which adults interpret and act upon ill-structured problems is necessary. As well, the influence of such judgments and actions on the needs of a growing diversity of learners is imperative.

Methodology

This study utilized case study methodology to explore the dispositions of three beginning teachers. Yin (2003) describes case study research as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13). It is virtually impossible to study professional judgments and professional actions outside the real-life context of teaching. They are embedded within each other.

Setting

The definition of dispositions states that dispositions are developed in deliberate professional education programs. The context chosen for this study involved such a program. Termed, developmental clinical assistance, the deliberate professional education adheres to seven principles of adult development found in Appendix B. Summarized, the conditions acknowledge the context of the beginning teacher as a learner and use new role-taking and guided inquiry to support a framework for development.

The seven conditions were being used as a foundation for an innovative program (the DPPE) to establish high-quality mentoring programs and retain beginning and lateral entry

teachers in a rural Southeastern county. Some of the challenges faced by the school system included high teacher attrition (as high as 81% in some schools) and exigent demographic features (for example, high rates of unemployment and adults without high school diplomas). The program in which the participants were involved had the goal of preparing twelve beginning teachers to engage in building relationships and implementing effective classroom instruction. Twelve mentors were also enrolled in the program in order to prepare themselves to assist the beginning teachers based upon the framework and conditions listed in Appendix B. The program was voluntary and was designed as a series of college graduate level courses meeting once a week for at least three hours.

Participants

Three participants agreed to be a part of the study after their mentors were selected as part of a similar study. Sherry was in her second year of teaching high school and entered the field through lateral entry (without a teaching degree or specific training in education). A teacher of Earth and environmental science, Sherry was Caucasian and 26 years old. She noted being influenced by many relatives who are also all teachers. Joseph was a Latino male, 24 years old. He was a first year teacher of language arts and social studies. Joseph entered the teaching profession by lateral entry through a program called Teach for America. As an American of Puerto Rican descent, Joseph considered himself to have a unique view of minority education and felt prepared to meet the challenges of diversity in the classroom. Finally, Susan, a 33-year-old Caucasian female had just started her first year as a science teacher after working as a research technician in animal science at a state university. Susan, also a mother of three children, entered teaching through an alternative licensure program similar to the lateral entry teachers.

Sources of Data

Quantitative

Judgments. Three measurements of professional judgment were administered to the participants. The DIT-2 (Defining Issues Test) is a measure of moral/ethical judgment (Rest, 1989). It is a projective multiple-choice test meaning the participants have to supply meaning to the items being rated. Five vignettes presenting a moral dilemma are given to participants who then rate and prioritize possible courses of action to solve the dilemma. Reliability has been reported in the high .70s to low .80s (Rest & Narvaez, 1998). Chang (1994) reports teachers average in the mid 40s (on a scale of 0 – 93) in terms of postconventional moral reasoning. Limitations do exist in terms of assessing deep structures with an objective measure versus a written or verbal task. Further, examination continues into the focus of the DIT on measuring macro-morality (society-wide structure) versus micro-morality (face-to-face relationships and individual development) although many argue that the two are inseparable (Walker, 2002).

The WUSCT (Washington University Sentence Completion Test, Hy & Loevinger, 1996) was developed as a projective measure of one's stage of ego development. Using sentence completions, the SCT allows subject to use his or her own frame of reference to complete 36 sentence starters. For example, "Being with other people…" or "The thing I like about myself is…" Each stem response is scored according the stages previously described then calculated using a method of averaging that results in one stage score. For example, if an individual had a composite score of "5", that would signify a person functioning mainly in the self-aware stage of ego. Although inter-rater reliability for the SCT has been reported at .94, Loevinger (1998) acknowledges the limitations of the

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assessment. There is not a guarantee that respondents will use their authentic frame of reference when responding to the sentence stems. Further, it has been found that persons typically display ego at various stages and a one-to-one correspondence between judgments and actions is not guaranteed. Finally, there is no error-free way to completely separate cognitive structure thus the use of three domains is necessary.

A means of assessing conceptual/reflective judgment was designed by Hunt and his associates. The PCM (Paragraph Completion Method, 1971) consists of six prompts or paragraph stems to which individuals reply. Three of the prompts assess how individuals contemplate conflict and uncertainty while the other three assess how individuals think about authority and the structure of rules. Stems include, "When I think about rules…" "When I am criticized…" "When I think about parents…" "When someone does not agree with me…" "When I am not sure…" and "When I am told what to do…" Each response generates a score from 0 – 3. An overall score is received by averaging the three highest response scores. Oja and Smulyan (1989) offered the following interpretation of scores: a score of 1 signifies categorical judgments and stereotyped thought, a score of 2 shows more self-delineation, awareness of alternatives, and awareness of emotions, and a score of 3 is characteristic of abstract internal principles and awareness of multiple viewpoints. Most adults exist in the quasi-reflective level (score ranging around 2) of conceptual judgment. . Inter-rater reliability for the PCM has been reported from .80 to .95 (Gardiner & Schroder, 1972). Similar to the SCT, the PCM does not provide a guarantee that participants will use their true frame of reference when responding to the prompts and a one-to-one correspondence between judgment and action is not maintained. Limitations also include the absence of longitudinal studies of developmental change in reference to conceptual level

(Hunt, Butler, Noy, Rosser, 1977). Such longitudinal evidence is necessary to uphold strong constructive validity. However, in terms of predictive validity, a review of over 200 studies by Miller (1981), resulted in consistent correlations found between conceptual level and need for structure in learning and instructional environments.

The three instruments are overlapping for the purpose of assessing cognition. The quantitative measures were used to assess professional judgment and provide a theoretical pattern predicting judgments and actions of each beginning teacher. I remained blind to the results of the assessments until after processing the qualitative data so as not to bias the coding.

Actions. Quantitative data were also gathered on three lessons taught by each beginning teacher using an adapted form of the Flanders Interaction Analysis System known as the GIAS (Guided Inquiry Analysis System) (Flanders, 1967; Reiman, 1999). The premise of both systems is a means by which to estimate "initiative-balance response of classroom interactions" (Flanders, 1970, p. 36). The system, as illustrated in Appendix E, consists of three categories: direct teacher interaction, indirect teacher interaction, and student talk. Research has shown that teachers using less direct and more indirect styles of instruction were able to increase student learning through accepting student ideas, promoting inquiry, and using prediction strategies (Rosenshine & Meister, 1994). The use of assessments such as Flanders declined when adoptions of statewide teacher appraisal systems emerged based on scripted data and process-product research. Critics maintained that Flanders was not able to distinguish between more specific behaviors such as types of questions, something the GIAS has accommodated.

Qualitative Data

Qualitative data were gathered around two cycles of assistance, a demonstration and an observation cycle, conducted by each mentor with his/her beginning teacher. A cycle of assistance was composed of the dyad engaging in three major activities: (1) identifying a teaching behavior focus on which the beginning teacher would like to work (i.e., positive reinforcement, lesson planning, etc.); (2) engaging in discussion and mentor demonstration of the behavior which included a pre- and post-conference around the demonstration; and (3) conducting pre- and post-observation conferences around the beginning teacher's utilization of the behavior in an instructional lesson. Observations of conferences between the teacher and his or her mentor, observations of lessons by the beginning teacher, analysis of artifacts asking the beginning teachers to self-analyze and reflect, and interviews with the beginning teachers were collected, transcribed, and coded for judgments and actions. The qualitative data were coded according to a list of indicators or "decision rules" (Miles & Huberman, 1984, p. 246) for each theoretical domain (e.g., moral/ethical, conceptual, and ego). As illustrated in Table 5.1, an overview of the moral/ethical coding matrix is derived from general trends in the literature (Yin, 2003). A complete matrix for each domain is included in Appendices P - R.

Table 5.1: **Overview of Coding Matrix for the Moral/Ethical Domain**

	Judgment	**Action**
Personal Interest Schema	Personal stake in outcome	Made without considering others
Maintaining Norms Schema	Rules and norms apply to everyone	Made out of respect for social system
Postconventional Schema	Norms are relative; there are idealized ways in which persons should interact	Ideals are shared, scrutinized, and constantly reevaluated

As seen in Table 5.1, the personal interest schema represents a decision maker's primary concern being only with his or her own stake in terms of outcomes (Rest, *et al.,* 1999). This schema can be disaggregated into a judgment category and an action category for teachers as reflected by the top row of Table 5.1. Judgments within the personal interest schema are made based upon self-interests only. Problems are perceived as external to the self. Across the horizontal axis, actions are linked to the judgments. Teachers who reason predominantly with the personal interest schema employ instructional strategies regardless of the needs of learners. As persons move down the vertical column of Table 5.1, an increase in complexity occurs as represented by the maintaining norms and postconventional categories. For example, at the postconventional level there is recognition of others in terms of cooperation and a realization that social norms are situational and must be subject to debate.

A similar matrix was designed for the conceptual domain as seen in Table 5.2. Across the horizontal axis, there are actions connected to judgments determined by the theoretical conceptualization and corresponding studies (Miller, 1981; O'Keefe & Johnston, 1989; King & Kitchener, 1994).

Table 5.2: **Overview of Coding Matrix for the Conceptual Domain**

	Judgment	**Action**
Pre-Reflective	Values high structured environments and views knowledge as fixed	Adherence to set norms and proven methods of instruction/coaching
Quasi-Reflective	Some tolerance for ambiguity with justifications that fit personal, established beliefs	Tends to imitate instructional methods with some sensitivity to the needs of learners
Reflective	Critical evaluation of evidence as part of decision-making process	Able to "read and flex" with the needs of learners and consistently reevaluates instructional decisions

Differentiation between the categories in Table 5.2 occurs mainly in the ability to employ a variation of teaching methods and instructional strategies based upon a deep understanding of the impact on learners. As persons move down the vertical axis of the matrix, an increase in tolerance and less need for structure is apparent as represented in the quasi-reflective and reflective categories. Table 5.2 shows how teachers at more complex levels (reflective judgment and action) display more flexibility in adjusting to the needs of learners based upon evaluating evidence from a variety of sources.

Last, Table 5.3 illustrates a summary matrix for the ego domain. The premise of the ego being that as complexity increases (down the vertical axis) so does one's ability to be self-aware and consider others' perspectives when making decisions.

Table 5.3: Overview of Coding Matrix for the Ego Domain

	Judgment	Action
Pre-conventional	Has a need to minimize controversy and change with little openness to learner perspective	Impulsive and self-protective with minimal involvement with the perspective of others - controlling
Conventional	Feels responsible for learners and an obligation to prevent them from making mistakes	Predicated by need for acceptance and acceptability
Post-conventional	Recognizes need for learners to construct knowledge independently and views mistakes as part of the learning process	Provides more latitude in learning experiences and engages in mutual evaluation

Actions correspond to judgments across the horizontal axis of Table 5.3 and are basically actualizations of how interpersonal experiences are integrating with the intrapersonal. For example as shown from left to right across the matrix, persons at a pre-conventional level of ego will make judgments based on a need to minimize controversy, which can be seen in a strict adherence to state curriculum with little acknowledgment of learner perspective or foundational skills. However as complexity increases, actions are based more upon norms that are chosen and evaluated by the individual shown in the conventional and post-conventional categories.   An increased sensitivity towards the needs of the self and others is apparent as those in the postconventional category engage in and challenge others to learn through discovery.

Although the matrices are based on three separate domains of cognitive development, they share common characteristics including delineation of categories of less to more complex reasoning (vertical axis) and a premise that actions are related to underlying judgments. To test the reliability of the matrices, two raters trained in both theories of adult development as well as processes of mentoring, supervision, and effective teaching coded the data independently (based on completed matrices located in Appendices P - R). Inter-rater

reliability was calculated by comparing coding that was the same by the two raters to the total number or results. Reliability was found at a .73 level of consistency.

Data Analysis

After the observed patterns in judgment and action collected through observations, interviews, and artifacts were coded for each domain according to the matrices, they were compared to the theoretical predicted patterns obtained from the three measurements of judgment (DIT-2, SCT, and PCM) and the GIAS as a measure of action. Analysis was conducted using a system known as pattern matching illustrated in Appendix A. It can include comparing observed patterns with theoretical ones and judgment patterns with actions. Using such a method greatly increases the validity of case study research (Campbell, 1975; Trochim, 1989). After analyzing data for convergence between theoretical and observed patterns, congruence between the judgments and the actions of the beginning teacher were analyzed in each domain. Finally, the influence of such judgments and actions were investigated in terms of interaction with diverse learners.

Results

The following section presents results from the study in terms of the three dispositional domains. Each section begins with an overview of the findings for each domain. This is followed by an examination of the results in terms of convergence between the theoretically predicted pattern of judgment and that which was observed. Finally, trends in teacher action are analyzed in terms of congruence with teacher judgment.

Moral/Ethical Domain

The moral/ethical domain characterizes how knowledge is constructed around problems of social justice and fairness. Judgment in the moral/ethical domain has been

described by one of three schemas: postconventional, maintaining norms, or personal interest. The DIT-2 was used in this study as a standardized measure to assess the distribution of each participant's judgments across these schemas. Results are presented in terms of how often a particular schema was used in responding to statements about five moral dilemmas. Table 5.4 shows the results for the moral/ethical domain. It begins with a report from the DIT-2 on the distribution of use of the three schemas. This is followed by an overview of the findings from the coding matrix gathered through interviews, observations of conferences between the teacher and his or her mentor, and artifact analysis (i.e., written self-reflection and analysis). The fourth column of Table 5.4 reports the findings from the GIAS taken as an average of three instructional lessons centered on a cycle of assistance with each teacher's mentor (one lesson measured before the cycle, one during, and one after). The data are reported in terms of two categories: direct versus indirect interactions and teacher versus student talk. Finally, the last column in table 5.4 shows an overview of the matrix in which moral/ethical actions were coded. Data for this column were gathered by observing the three lessons, observing conferences between the teacher and his or her mentor, and examining artifacts such as written lesson plans and self-assessments of teaching.

Table 5.4: **Summary of Findings in the Moral/Ethical Domain for Beginning Teachers**

Teacher	Standardized Measure (Schema Distribution)			Findings from Application of Matrix (Judgment)	GIAS Assessment from Three Lessons				Findings from Application of Matrix (Action)
	Post-Conventional	Maintaining Norms	Personal Interest		Direct Interactions	Indirect Interactions	Teacher Talk	Student Talk	
Sherry	.30	.42	.28	Uphold rules and norms Adhere to school structure Vary teaching style for different learners	.85	.15	.53	.47	Maintain established order Used proven methods of instruction Willing to try varied instructional methods
Joseph	.34	.38	.18	Need for clear norms and expectations Noted personal interest in making decisions Considered rights of learners	.80	.20	.81	.19	Maintain classroom structure Stressed student adherence to norms Willing to have ideas questioned
Susan	.36	.56	.08	Uphold established rules and respect authority Some norms can be altered Considered rights of learners	.60	.40	.62	.38	Used proven methods of instruction Maintain established order Facilitative role during instruction

Convergence Between Theoretical and Observed Patterns

As seen in Table 5.4, similarities and differences existed between the participants in terms of results reported by the DIT-2. Shown in the second column, all of the teachers were using the maintaining norms as their primary judgment schema with Susan being the most consolidated within this schema at 56%. Sherry followed at 42% and Joseph at 38%. However, it is also important to note the distribution of personal interest and postconventional schema. For Sherry, there was almost an equal use of postconventional at 30% and personal interest at 28%. Susan displayed a significant difference with postconventional reasoning (36%) reported more than four times more than personal interest (8%). Similar results emerged for Joseph who continued to show some personal interest

schema (18%) although only half as often as the postconventional (34%). What would be expected from these results? Considering the similarities in percentage of maintaining norms reasoning, it is likely all three participants would adhere to established rules and policies. Rules should be clear and consistent and apply to everyone. There is a view of a school as a hierarchical structure and an emphasis is placed on respecting authority within such structure. According to Susan's low percentage of personal interest reasoning (8%) it would be expected that she and Joseph (18%) would show a strong consolidation in maintaining the norms of the school as well as show emerging judgments that consider the rights of their students as individual learners.

Convergence existed between these theoretical patterns and the observed patterns illustrated in the second column of Table 5.4. A significant trend for all three participants was to maintain the structure of their classroom and of the school climate. For example, Sherry spoke about having to hold class in another teacher's room.

> We still have to follow the rules that are pertinent to the classroom...I certainly feel like if we're borrowing her room I should follow her rules, because if she were in my room I would want her to follow mine" (Sherry, Observation Post-Conference, lines 87-88; 136-137, November 2003).

Joseph also focused a great deal on having a class in which expectations were clearly established and procedures were followed. "I believe there needs to be an established set of norms. Normally people expect these norms to be explicit…many times they are not usually resulting in inefficiencies or conflict" (Joseph, Self-Reflection #19, November 2003). Susan wanted to maintain order in her class by having students raise their hands instead of calling out answers. Yet, as indicated in Table 5.4, wanting to maintain order stemmed from a

concern for the rights of learners. "I know three or four students are monopolizing the lesson so equity is still a problem" (Susan, Follow-Up Interview, lines 121-122, December, 2003). Joseph had similar concerns, "I don't want to put [students] in a position where they're not going to pass, they're not going to succeed. It's frustrating to them as well as for the rest of the class" (Joseph, Demonstration Pre-Conference, lines 49-51, November 2003). He, like Susan, acknowledged learners as individuals however, both participants based judgments in terms of maintaining the norms of the classroom and the school.

Congruence Between Judgments and Actions

Columns four and five of Table 5.4 present findings on moral/ethical actions. First results of the GIAS are presented. These are average percentage rates recorded from three lessons conducted by each beginning teacher. The first lesson occurred prior to a cycle of assistance with his or her mentor, the second occurred during the cycle, and the final lesson occurred after the cycle. Table 5.5 focuses on the results of the GIAS compared to the distribution of schemas assessed by the DIT-2.

Table 5.5: **Comparison of DIT-2 and GIAS for Beginning Teachers**

Teacher	DIT-2			Direct Interactions	Indirect Interactions	Teacher Talk	Student Talk
	Post Conventional	Maintaining Norms	Personal Interest				
Sherry	**30%**	42%	**28%**	**85%**	15%	**53%**	47%
Joseph	**34%**	38%	**18%**	**80%**	20%	**81%**	19%
Susan	**36%**	56%	**8%**	**60%**	40%	**62%**	38%

Several important trends are shown in Table 5.5. First, there is an inverse relationship between the percentage of postconventional and personal interest schema. So,

what might be the effect of this relationship on teacher interaction with students? In terms of

amount of time teachers spend talking versus their students, Table 5.5 shows Joseph

spending a great deal of time on teacher talk (81%) while Sherry's average was more

balanced (53% to 47% teacher to student talk). This indicates, for Sherry, more opportunities

were given for students to participate in the lesson through behaviors such answering or

asking questions. No patterns between teacher/student talk and results from the DIT-2

existed. Table 5.5 does show apparent trends in terms of the type of teacher talk that was

used. Again, as the second column indicates, postconventional and personal interest schemas

are inversely related. When the teachers used more postconventional reasoning and less

personal interest judgments, the percentage of direct instruction decreased. Teachers spent

less time providing information and giving direction and more time prompting inquiry,

accepting and using students' ideas and offering reinforcement. For example, Susan used

36% postconventional reasoning and only 8% personal interest. According to the trends, her

indirect interactions should be measurably higher than Sherry who was using 28% personal

interest schema and only 30% postconventional reasoning. The data supports the trend with

Susan engaging in indirect interaction for 40% of the time while Sherry was only able to use

15% indirect interactions with students (i.e., prompting inquiry, clarifying or using student

ideas, reinforcing, etc.).

How does the coding matrix support this data and converge with the participants'

judgments? Table 5.4 indicated Susan's primary schema being maintaining norms. This was

consistent with her action in reference to encouraging students to raise their hands and talk

one at a time and the use of the same method of instruction for all three lessons. As

previously explained, Susan was also able to employ more indirect strategies of instruction

(60%). When interacting with her students, she used behaviors such as prompting further

inquiry and using student ideas to facilitate discussion.

Susan:	Let's think about what we know about these missions. What do we
	know about Apollo 11?
Student:	It was the first on the moon.
Susan:	It was the first one that went to the moon…The first one to take
	humans to the moon. Okay, Apollo 13 was made into a movie.
Student 2:	It had Tom Hanks.
Susan:	It had Tom Hanks in it. So, what do you know about Apollo 13? Why
	was it made into a movie?
Student 2:	They almost died.
Susan:	They almost died. Why?
Student 3:	Something blew up… (Susan, Post-Observation Lesson, lines 104-
	128, December 2003).

Susan was able to veer from the structure of her lesson plan to consider the

perspective of her learners congruent with an increasing percentage of postconventional

reasoning shown in Table 5.5. A significant majority of the interactions used by Sherry and

Joseph were direct. They worked to maintain the hierarchy of their class (teacher as

authority, student as learner) congruent with their judgments. Joseph expected the norms of

the class to be upheld and pushed students to answer questions one person at a time. For

example, Joseph was asking students questions about a novel he was reading aloud. He

asked a question that caused some conversation to begin between students, but Joseph

quickly pulled the students back into a structure of him asking the question and one student

answering. This shows Joseph's reluctance to fully engage the learners in a class discussion.

Sherry stressed the need for her students to listen to the information she was providing them.

"If you don't pay attention, you're not going to know which way to hold the moon and

you're going to screw everyone up and everyone's going to be mad at you" and "Pay

attention or you're not going to have the set-up right" (Sherry, Observation Lesson, lines

136-138, November 2003; Post-Observation Lesson, lines 127-128, December, 2003). As

the use of the personal interest schema decreased indicated by Table 5.6, more openness to

student input was noticed. For example during one of Joseph's lessons about using

quotations to support a position on the Spanish-American War, the following exchange

occurred regarding a paragraph Joseph's had written on the board.

Student: Why doesn't he care about human life because that means he doesn't

                care about himself?

Joseph: Well, that brings up a good point. Maybe I should put, "The

                government of the United States does not value other human life."

                Maybe that would be better.

Student: Yeah.

Joseph: Okay, that's a good point. However, I'm going to leave it like that for

                now... (Joseph, Observation Lesson, lines 200-209, December 2003).

Joseph allowed his ideas to be questioned however, his value in maintaining the norms and

structure in his classroom did not allow for a great deal of discussion or debate among

students. As indicated by Table 5.5, the majority of Joseph's class instruction was spent as

direct interactions with students (80%).

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Convergence existed across all spectrums of the moral/ethical domain. Theoretical, predicted patterns matched those that were observed and measures of judgments converged with measures of actions. Where the beginning teachers showed similar judgments and actions characteristic of maintaining established norms, variations existed as the percentage of personal interest schema decreased and postconventional reasoning increased. With increased percentages of postconventional reasoning, teachers became more open to the learner perspective and engaged in more indirect interactions such as prompting inquiry and accepting and using student ideas.

Ego Domain

Ego is a cognitive construct describing an individual's ability to integrate intrapersonal (self) understanding with interpersonal (others) understanding as a frame for reference for making decisions. The level of ego judgment for participants was assessed using the SCT and can be summarized as one of three categories (Hy & Loevinger, 1996): pre-conventional (levels 1-3), conventional (levels 4-6), and postconventional (levels 7-8). A summary of findings in these categories and other measures of ego domain are presented in Table 5.6. First, results of the SCT are reported. This is followed by findings from the coding matrix for ego gathered from interviews with the teachers, observations of conferences between the teacher and his or her mentor, and analysis of artifacts such as lesson plans and self-reflections. The fourth and fifth columns of Table 5.6 illustrate findings for action in the ego domain. Results of the GIAS data are presented first taken as an average of the direct/indirect interactions and teacher/student talk for the three instructional lessons. Finally, qualitative data gathered from observations of the lessons, conferences

between the teacher and mentor, and artifacts including self-assessment of instruction are summarized in the last column of Table 5.6.

Table 5.6: **Summary of Findings in the Ego Domain for Beginning Teachers**

Teacher	Standardized Measure (Ego Distribution)	Findings from Application of Matrix (Judgment)	GIAS Assessment from Three Lessons				Findings from Application of Matrix (Action)
			Direct Interactions	Indirect Interactions	Teacher Talk	Student Talk	
Sherry	Early Conventional (Level 4) (Conformist)	Concerned with appearance Focused on goal of teaching skills and self-awareness Considered the perspective of diverse learners	.85	.15	.53	.47	Simple expression of emotion in present terms More specific emotion in reflection Made choices based upon behavior of certain classes
Joseph	Conventional (Level 5) (Self-Aware)	Concerned with appearance Maintain conformity Considered the perspective of diverse learners Self-critical	.80	.20	.81	.19	Presenter of instruction Some expression of emotion Reflected on needs of learners Developed own standards for self and student achievement
Susan	Late Conventional (Level 6) (Conscientious)	Responsible for others Focused on challenges of having multiple roles Considered perspective of diverse learners Self-critical	.60	.40	.62	.38	Encouraged curiosity Lack of emotion when conferencing with mentor Specific emotion in written reflection

Convergence Between Theoretical and Observed Patterns

Table 5.6 indicates each participant in the conventional category of ego judgment, although the specific level within the category varies by participant. From this data one would expect to see all participants making judgments that take some outside perspective into account. However, the ability to integrate the perspective of others with one's own beliefs and values may differ. For example, at a conventional, conformist level, Sherry may show judgments aligned primarily with outside perspective. Joseph (self-aware) may show

similar trends but recognizes the importance of acknowledging his own perspective as well.

According to Table 5.6, Susan at the conscientious level is starting to balance self-awareness with an understanding of others. This adds a feature of feeling responsible for other's learning which is an important threshold for the teaching profession in being able to recognize and internalize the needs of learners. As seen in the second column of Table 5.6, data from the coding matrix resulted in similar trends. All three participants showed some consideration for the perspective of their learners consistent with a conventional level of ego. Sherry planned a lesson that would provide a demonstration for visual learners of the phases of the moon. Joseph wanted to work on making higher order questions appropriate for diverse learners and Susan knew she had to make science relevant to her students. Differences existed in the justifications the participants gave for using certain teaching strategies. Sherry wanted to design lesson plans that would please her principal. She noted, "This is something I really needed to work on to get up to par. So when someone says, 'Where are your lesson plans?' I can say, 'Well, here they are" (Sherry, Observation Pre-Conference, lines 106-108, November 2003). She was not able to choose a structure that was self-evaluated or assessed in terms of learner needs, but focused on adhering to external norms and pleasing authority figures. Joseph was also concerned about appearances.

> I like to kind of show it off when people come in the room. I like people to see these kids are learning, that they want to learn, and they want to offer feedback. I don't really get visitors…I thought in my head, let's show off what we can do (Joseph, Follow-Up Interview, lines 177-181, December 2003).

He valued conformity to rules he had established for himself and his students such as maintaining eye contact and being able to "offer good answers" (Joseph, Follow-Up

Interview, line 104, December 2003). As seen in Table 5.6, Susan's judgment was assessed at a late conventional stage. She was aware of the needs of others and integrated their perspectives into her judgments. This was often accompanied with a feeling of personal responsibility for student learning or lack thereof. "I'm going to make sure that [I'm] dealing with all students the same. I have some students that are not working, but I'm not giving them opportunity in class" (Susan, Demonstration Pre-Conference, lines 26-28, November 2003).

Congruence of Judgments and Actions

Column four of Table 5.6 reports the findings for the GIAS in terms of direct/indirect classroom interactions and teacher/student talk. As with the moral/ethical domain, one would expect trends in the data to exist. For example, as the level of ego reasoning increased, the amount of direct interaction would decrease. As seen in Table 5.7, examples of such trends existed.

Table 5.7: Comparison of SCT and GIAS

Teacher	SCT	Direct Interactions	Indirect Interactions	Teacher Talk	Student Talk
Sherry	**Early Conventional Level 4**	**85%**	15%	**53%**	47%
Joseph	**Conventional Level 5**	**80%**	20%	**81%**	19%
Susan	**Late Conventional Level 6**	**60%**	40%	**62%**	38%

Table 5.7 indicates Joseph spent a significant amount of time during his lesson on teacher talk (81%) leaving less than 20% of class time for students to engage in behaviors such as responding to or asking questions. Sherry however, allotted almost equal time to teacher talk

(53%) and student talk (47%). Susan's percentage of teacher to student talk was more of a

two-thirds ratio. This does not adhere to any specific pattern. However, trends do emerge

when comparing the participants' judgment score on the SCT with the percentage of direct

interactions. Similar to the moral/ethical domain, an inverse relationship exists. As the level

of ego judgment becomes more complex, the level of direct interaction decreases as shown in

columns two and three of Table 5.7. This signifies reduced percentages of providing students

with opinions and information from the teacher. As seen in the table, indirect interaction

begins to increase which includes accepting ideas and feelings from students, asking

questions and encouraging analysis, and providing reinforcement. Susan averaged 40%

indirect interactions with her students. In congruence with her level of ego, she was able to

accept and integrate ideas presented by learners into her lesson. She encouraged further

analysis and provided reinforcement.

Susan:	If you're looking up in the sky and you saw more than one shooting star, what would it look like was falling?
Student:	It would look like a lot of things are falling.
Susan:	Hmmm, it would look like a lot of things are falling, but there's a special word for it.
Student:	A meteor shower?
Susan:	A meteor shower, it would look like it was raining (Susan, Observation Lesson, lines 240-250, December 2003).

As seen in Table 5.7, Sherry and Joseph tended to use more direct teaching strategies

consistent with the judgment to maintain conformity in the teacher as a presenter of

knowledge. Joseph exhibited frustration in terms of his class not conforming to the expected

question-answer procedure. He decided to just start calling on students and "not wait for them to raise their hands" (Joseph, Follow-Up Interview, line 190, December 2003). This was in contrast to a judgment that "some students just can be put on the spot for questions, they're not able to deal with pressure if they get it wrong" (Joseph, Observation Post-Conference, lines 127-129, December 2003). At the conventional stage, Joseph was more concerned with how his class appeared during an observation than their emotional perspective. Sherry made similar decisions based in a concern with appearances. She chose to have an observation in her fourth period class since she had experienced several "behavior problems with first and third" (Sherry, Observation Pre-Conference, lines 21-22, November 2003). As seen in Table 5.6, all three participants were able to express some emotion in terms of themselves in relation to their students. For Sherry, this was integrated in her concern for how her class would appear when her mentor was observing.

> It's more nerve-racking than I thought it would be and I guess the worst part was I kept thinking that the kids were talking too much, with being videotaped just trying to hear what I was saying would be difficult over that. So it was worse than I thought it was going to be (Sherry, Observation Post-Conference, lines 15-18, November 2003).

Joseph's self-assessment of his lesson showed the use of simple, one-dimensional emotion. "I was happy with the lesson and generally happy with the responses given by the students because the quality of their work was good" (Joseph, Self-Assessment #12, December 2003). Susan's emotions were based in frustration with not making a connection to her students. "I was not prepared for the behavior of some of my students. I knew that they would bring a lot of baggage with them to school, but I am having a hard time dealing with it" (Susan, Self-

Assessment #4, November 2003). As seen by the statements, expression of emotion was congruent to the assessment of ego judgment.

In summary, convergence existed between the theoretical and observed patterns as well as the components of judgment and action. Although the participants were assessed within the same category of ego, variation in level proved significant in terms of integrating self awareness with awareness of others.

Conceptual Domain

Conceptual judgment is used to describe the ability of a teacher to reflect on various perspectives and make decisions in response to the needs presented by learners. For this study, the conceptual judgment of the three participants was assessed by the PCM. It was reported as one of three levels: pre-reflective, quasi-reflective, or reflective. Summary of these and other findings in the conceptual domain are presented in Table 5.8. As seen in the table, an overview of results of the PCM is presented followed by a summary of the findings from the application of the coding matrix. Data for the matrix included interviews, observations of conferences between the teacher and his or her mentor, and analysis of artifacts such as self-assessment and reflection. Columns four and five then provide an overview of conceptual action. First the GIAS was used to assess direct and indirect interaction and teacher/student talk in three instructional lessons for each participant. These lessons were recorded based upon a cycle of assistance in which the beginning teacher and his or her mentor were engaged. One lesson was used before the cycle, one during, and one after. Finally, the last column shows results of the coding matrix for conceptual action. Data for the matrix was gathered through observations of the instructional lessons and

teacher/mentor conferences as well as artifact analysis. Trends in Table 5.8 will be examined

in terms of theoretical/observed patterns and congruence between judgment and action.

Table 5.8: **Summary of Findings in the Conceptual Domain for Beginning Teachers**

Teacher	Standardized Measure (Conceptual Distribution)	Findings from Application of Matrix (Judgment)	GIAS Assessment from Three Lessons				Findings from Application of Matrix (Action)
			Direct Interactions	Indirect Interactions	Teacher Talk	Student Talk	
Sherry	Level 2.0 Quasi-Reflective	Weary of trying new methods of instruction Justified beliefs within a particular context Some tolerance for variation in structure	.85	.15	.53	.47	Imitated suggestions for instruction Utilized cooperative grouping Only able to adjust to needs of some diverse learners
Joseph	Level 1.75 Late Pre-Reflective	High value in structure and conformity Difficulty evaluating evidence from a variety of sources Concerned with pleasing others	.80	.20	.81	.19	Maintained high structure Difficulty being self-directed Not able to adapt instruction to diverse learners Used some higher order questioning
Susan	Level 1.5 Pre-Reflective	Low tolerance for ambiguity and uncertainty Valued high structure and respecting authority Difficulty understanding students' emotional needs	.60	.40	.62	.38	Use of proven methods of instruction Imitation of new teaching strategies Able to use ideas presented by learners

Convergence Between Theoretical and Observed Patterns

Table 5.8 summarizes the findings for the conceptual domain. Scores for each

participant on the PCM are provided in the second column and offer a predicted pattern for

conceptual judgment. Sherry's score of 2.0 is indicative of a quasi-reflective level in which

moderate amounts of structure are needed for both teaching and learning environments.

Individuals at this level tend to justify their beliefs within a particular context, but are willing

to consider alternative strategies. As shown in Table 5.8, Joseph and Susan were both assessed at a pre-reflective level, although scores indicate Joseph might be transitioning to a quasi-reflective level. Individuals having pre-reflective judgment do not tolerate ambiguity well and tend to prefer high structure in teaching and learning environments. Dilemmas are seen as having a right or wrong answer with little consideration of varying sources of evidence. In fact, beliefs cannot be disconfirmed by reference to evidence (even in light of opposing evidence, persons will not change their views). Consequently, teachers at the pre-reflective level lack the ability to continually self-assess and evaluate evidence. The coding matrix, seen in the third column of Table 5.8 describes points of convergence with the PCM assessment. For example, Susan had a difficult time dealing with situations of ambiguity.

> It seems the more the semester goes on, the less prepared I feel. So I can, I feel more comfortable getting through the lesson, but I just don't feel like I know what I'm talking about because I'm not familiar with some of it. I've gotten better at walking into a class not being very comfortable, but I don't feel prepared when school starts (Susan, Observation Post-Conference, lines 43-46, December 2003).

She was relieved when such ambiguity seemed to subside, "It seems like once the cycle and the class was over no matter how good or bad I did I just felt better just because it was over (Susan, Follow-Up Interview, lines 65-66, December 2003). Susan, like Joseph, appreciated structure in terms of teaching (i.e., having students answer questions one at a time) as well as learning. Joseph commented, "I want to get better every lesson, but I can't do that if everybody always tells me that things are fine" (Joseph, Self-Assessment #30, December 2003). His judgments indicated a need for higher amounts of structure from his mentor in terms of suggesting areas for improving his teaching. As indicated by Table 5.8, Sherry's

conceptual judgment was at a more complex level. She was able to tolerate certain levels of uncertainty, although remained cautious in terms of utilizing new instructional strategies. After given a suggestion by her mentor to try using small cooperative groups, Sherry responded, "If I do small group work I've got this group over here and this group over her and I'm not sure. I have thirty kids and that's hard…I can't be everywhere" (Sherry, Observation Post-Conference, lines 167-169, November 2003). Sherry justified many of her beliefs based upon the contextual issue of class size. This is consistent with quasi-reflective judgments. Beliefs are justified within a given context. However, individuals are moving toward and ability to evaluate evidence from more than one side of the issue. For example, Sherry was able to consider a different perspective in the following example.

> I could tell it was gong to be a talkative day...it was good to see they were. I felt great because they were involved and they were interested and they were asking a ton of questions, which is great because that shows me that they are interested (Sherry, Follow-Up Interview, lines 41-46, December 2003).

Sherry continued noting that it was frustrating that she could not answer all of their questions. It was difficult for her to consider an appropriate instructional method to respond to the students' needs.

Congruence of Judgments and Actions

Columns four and five of Table 5.8 present data collected on conceptual action. Column four reports quantitative findings gathered by the GIAS from the three instructional lessons in reference to two categories: direct/indirect interactions and teacher/student talk. The final column presents a summary of data gathered by application of the coding matrix

for conceptual action. In order to investigate possible trends between judgment and action,

Table 5.9 displays the GIAS report along with results from the PCM.

Table 5.9: Comparison of PCM and GIAS for Beginning Teachers

Teacher	PCM	Direct Interactions	Indirect Interactions	Teacher Talk	Student Talk
Sherry	**Quasi-Reflective Level 2.0**	**85%**	15%	**53%**	47%
Joseph	**Late Pre-Reflective Level 1.75**	**80%**	20%	**81%**	19%
Susan	**Pre-Reflective Level 1.5**	**60%**	40%	**62%**	38%

Table 5.9 illustrates how the quantitative data on judgment and action compare. As

with the other domains, trends and patterns should emerge. We would expect as the level of

conceptual judgment becomes more complex, direct instruction would decrease along with

the percentage of teacher talk. As well, one would expect to see more careful self-

assessment of evidence from a variety of perspectives. Indicated in Table 5.9, this is true

only in some respects. First, in terms of the ratio of teacher versus student talk, Sherry was

able to achieve somewhat of a balance (53% to 47%). The lessons assessed by the GIAS

showed about half of her instruction time being teacher talk while the other half offered

opportunities for students to answer questions or initiate other forms of talk. According to

the PCM for Joseph (1.75) one would expect to see slightly higher percentages of teacher

talk, however Joseph maintained a much higher rate (81%). In terms of direct versus indirect

interaction, Susan, although assessed by the PCM to have a less complex level of conceptual

judgment, engaged in the greatest amount of indirect behavior (40%). She tended to use

more reinforcement and prompting inquiry from students where Sherry and Joseph used

much more direct interaction when teaching (85% and 80% respectively). Considering these are unusual results, supporting evidence from the coding matrix is helpful. In reference to the balanced ratio of teacher/student talk in Sherry's lesson, one might consider her judgments in terms of willingness to try varied instructional methods. Where she may have been wary of using small cooperative groups as suggested by her mentor, Sherry did utilize this method in her lesson after the cycle. This reduced the amount of time she spent providing the students with information and increased the amount of time they were able to initiate talk. In terms of her direct interaction (85%), like Sherry's judgments indicated she was able to tolerate some variation in classroom structure, yet she kept the focus of instruction on her predetermined lesson without veering to address student's questions or use their ideas. For example,

> Sherry: …and the moon moves around the Earth.
>
> Student: Is it a perfect circle?
>
> Sherry: No, but we're not getting to that yet, we'll get to that later (Sherry, Observation Lesson, lines 120-124, November 2003).

Further, Sherry's utilization of small groups was more of an imitation of the instructional method. She was not able to show a deep understanding of the rationale for using such strategies in terms of addressing the needs of various diverse learners. Sherry commented that when adapting instruction to the needs of perceived higher achieving students, she felt it best to "focus on the lower achievers and their learning styles" (Sherry, Self-Assessment #10, December 2003). Joseph showed similar actions in stating he was confident he had met the needs of diverse learners by providing them with a "handout, oral presentation, and modeled example" (Joseph, Self-Assessment #22, December 2003).

However, Joseph was apt to measure student success through verbal participation, which tended to be in quick question answer format. For example,

Joseph: How about the trophies?

Student A: He gave both the trophies to his sisters.

Joseph: He gave the trophies to his sisters, which one to which B?

Student B: Um, the gold trophy to his little sister.

Joseph: The gold to the little sister, okay. Silver, C?

Student C: The silver one went to his big sister (Joseph, Pre-Observation Lesson, lines 19-29, November 2003).

Table 5.9 shows Joseph's teacher talk and direct instruction being at similar percentages (80% and 81%). He was not able to vary his instruction to meet the needs of diverse learners especially those that were not auditory learners. In reference to his judgment of needing some structure and guidance, this may be an effect of his mentor not providing suggestions for change. As indicated by Table 5.9, Susan maintained a teacher/student talk ratio of 62% to 38%. She afforded the opportunity for students to ask and respond to questions however, there was very little variation in her instructional format. She used the traditional method of instruction of providing information, having students answer questions, and then going over the answers together in all three recorded lessons. As seen in Table 5.9, of Susan's interactions, 40% were indirect. She often prompted the students further to get them to answer questions she thought were too basic. "I do not feel like I will ever be able to get past memory questions with my students" (Susan, Self-Assessment #2, November 2003). When Susan did receive answers from students she was able to use them to further the class discussion.

Overall, trends were found between the actions of beginning teachers and their corresponding judgments using both the GIAS and the coding matrix for the conceptual domain. With minimal variation, judgments from the application of the coding matrix were also found to be congruent with the theoretical patterns predicted by the PCM.

Results from the study have been presented in terms of three dispositional domains. Assessment of the convergence between two methods of collecting data revealed significant findings. Congruence was found between teacher judgments and actions in all three domains. These results and findings will now be discussed in light of past research with an emphasis on the new discoveries emerging from this study.

Discussion

The purpose of this study was to examine the congruence between the professional judgments and professional actions of beginning teachers and the influence these components have on interactions with students. The following section discusses the answers to these specific questions as well as others. First, the results of the current research are discussed in light of previous studies. Next, the convergence of two methods of assessment, standardized measures and coding matrices was found and will be summarized. This is followed by a discussion of the congruence between the judgments and actions of the beginning teachers. Finally, impact of the findings on teacher education and teacher professional development programs will be explored. Throughout this section, discussion of the influence of teacher judgment and action on the interactions with diverse learners will be presented.

The dispositions of beginning teachers have a significant influence on addressing the needs of diverse learners. This parallels research claiming one of the most important factors for student achievement is teacher quality (Wright, Horn, & Sanders, 1997). Such quality

can and should include the amount of tolerance a teacher has, an ability to read and flex to a multitude of perspectives, a tendency to make decisions based on a wide array of evidence, and a capacity to be a model of social justice. Such characteristics were identified in past research with similar connections emerging from this study. Johnston and Lubromov (1987) described the impact teachers with more complex levels of moral/ethical judgment had on students. These teachers were seen as more democratic in nature while those at less complex levels worked to maintain social order. In the current study, all of the participants scored below the average percentage of postconventional reasoning. As first or second year teachers this is common (Reiman & Watson, 1999). There was a certain need for maintaining the structure of the classroom through rules and procedures and upholding the social norms of the school. Students held little say in matters of creating or discussing rules. Issues with needing control and structure converge with the data presented by Reiman and Watson (1999) in that beginning teachers often increase the amount of direct teaching they use as the year progresses. What Reiman and Watson also found was that beginning teachers who worked in a program specifically targeting cognitive development become more analytical and reflective about their teaching. This was also true in these case studies. In the last conferences recorded as well as exit interviews, the participants were able to discuss some of the benefits and consequences of their instructional choices and were apt to make goals for modifying their behavior.

What the past research lacks is addressing the convergence between theoretical and observed patterns and beginning teacher judgments and actions. Evidence gathered through interviews, observations of lessons and self-assessment and reflection proved especially valuable in answering these questions. First, an overall convergence existed between the

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theoretical patterns predicted by the standardized measures of judgment and observed patterns gathered through the application of a coding matrix. As Loevinger (1977) noted rarely do individuals exist in one consolidated level making direct convergence impossible although apparent trends were found. As the beginning teachers moved to more complex levels of judgment, they were able to acknowledge the perspective of their learners, consider varying instructional methods, and self-assess the impact of their instruction. However, as the trends suggest, all participants remained at an average to below average level of complexity in all domains as measured by the DIT-2, SCT, and PCM. Judgments assessed by the coding matrices resulted in similar findings. Reasoning by the beginning teachers was centered on maintaining an established structure within their classrooms and reducing ambiguity and uncertainty that often comes from a complex new role such as teaching.

A strong congruence was also found between teacher judgments and actions. In reference to assessing professional actions, the GIAS proved reliable in assessing interactions between the beginning teacher and his or her students. Percentages from the GIAS provided a clear picture of the level of student engagement allowed by the beginning teachers as well as how often the teacher used indirect behaviors such as prompting inquiry, clarifying and using student ideas, or providing reinforcement. Application of the coding matrices provided supporting evidence for the GIAS. Again, when comparing the GIAS and coding matrices for action to the standardized measures and coding matrices for judgments, congruence was evident. For example, in the moral/ethical domain, beginning teachers were predominately using the maintaining norms schema for reasoning. Judgments were based in adhering to the rules and structure of the classroom and school. Sherry designed lesson plans that would "please" her principal. Susan worked on strategies to get students to raise their hands instead

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of talking out. Joseph's goals for students included conforming to his established norms through behaviors such as eye contact and verbal response. Trends in the ego domain were similar with differences between participants apparent in their interactions with learners. Sherry (early conventional) and Joseph (conventional) were concerned with how the behavior of their classes would be perceived by others. Decisions such as when to have an observation or self-assessments of instruction were based highly upon student behavior in terms of how loud the class may have been or their lack of verbal response. As the judgments in ego became more complex, an awareness of the needs of learners was apparent. Susan (late conventional) considered herself responsible for the need of the learners. She encouraged their curiosity and used class discussions to make content relevant to their lives. Finally, in the conceptual domain, more complex judgments often resulted in a variation of instructional method and reduction in the need for structure in the classroom. Sherry, the only participant at a quasi-reflective judgment level, was able to vary the structure of her lessons from using lecture to demonstration and cooperative group exercises. However, Joseph and Susan, both pre-reflective, maintained the same method for teaching throughout their lessons. They were not able to vary their teaching strategies from proven methods of instruction.

These discoveries have multiple implications for teacher education and development. The use of the coding matrix proved reliable in providing supporting evidence and descriptive characteristics to the standardized measures. Where quantitative assessments have the potential to describe trends in large groups such as cohorts of preservice or beginning teachers, the coding matrices could be used with individuals at various junctures in the teaching curriculum. For example, teacher educators could use the matrices as a

powerful descriptive tool for assessing the dispositions of preservice teachers before, during, and after student teaching. Mentor coordinators could use the tool when considering the best mentor match for beginning teachers. Although further development and study is necessary, the matrices have the potential to be a worthwhile means of doing descriptive assessment. The PCM, SCT, and DIT-2 provided a valid means of quantitatively assessing the three judgment domains while the GIAS was successful in accurately measuring verbal interactions and paralleled the qualitative data on professional action. Again, the GIAS could effectively be used to assess beginning teacher actions throughout the induction phase of their career providing valuable evidence in how often students are allowed to engage as well as the percentage of time a teacher spends prompting inquiry or accepting student ideas versus providing their own information. Although trends were apparent, further studies with larger, more diverse samples of beginning teachers are necessary to determine if correlations between the standard measures of judgment and the GIAS are statistically significant. This study was done using three lateral entry beginning teachers working with middle or secondary students. Broadening the exploration to include teachers in other fields as well as those trained by traditional teacher education programs is necessary.

John Dewey (1964) once stated, "to depend wholly, or even chiefly, upon the knowledge and use of 'methods', is an error fatal to the best interests of education" (p. 198). He saw one of the primary challenges for teachers being the development of dispositions toward reflection, inquiry, ethical judgments, and orientation towards the multifaceted processes of students (Dewey, 1904). The suggested assessment resources recognize the intricate nature of teaching described by Dewey and make the move beyond knowledge and skills. It provides a theoretically sound conceptualization of disposition, one that is both

clear and measurable, and something that has been a missing link in teacher development

until now.

CHAPTER SIX – SUMMARY AND IMPLICATIONS

Through this final chapter, I retrace the steps of establishing a functional definition of and theoretical framework for studying dispositions. This is followed by an overview of my findings conceptualized in terms of three overarching themes: measurement and data collection, congruence of judgment and action, and a five-component model of disposition. Finally, questions for future study are presented.

The Structure of the Study - Revisited

When I started this research, I knew it would be important to the field. Standards for teacher education and development were stressing the significance of disposition in terms of assisting all children to learn (NCATE, 2002; Powers, 1999; NBPTS, 1989). Research on student achievement maintained teacher quality (including disposition) was a prime factor in student achievement (Wright, Horn, & Sanders, 1997; Darling-Hammond, 1999). Yet, "disposition" lacked clarity and general understandability in the educational community. There was a need to explore this elusive concept and hopefully derive some "sound practices" from a rather "functional vagueness" (Murray, 1996, p. 420).

However, I recognized there would be challenges to face. The lack of a definition that was both concise and measurable was the first hurdle. Teacher education as an atheoretical profession was the second challenge that had a direct association with the problem of definition. Finally, my third challenge existed in making a decision on the most justifiable means by which to gather evidence on teacher disposition. When the concept of dispositions emerged on the forefront of teacher education, it was and still remains associated with constructs such as "beliefs", "values", and "attitudes" (Johnson, 2003). Yet, there had to be something deeper as explained by Kelley, Combs, Rogers, and Maslow (ASCD, 1962),

"these beliefs and values are not just intellectual or abstract ideas but, rather, deep and consistent convictions which affect actions" (p. 199). From an integration of work from Katz and Raths (1985), Shulman (1998), and Reiman and Johnson (2004), a functional definition emerged: Disposition is defined as an attributed characteristic of a teacher that represents a trend of a teacher's judgments and actions in ill-structured contexts. Further, it is assumed that these dispositions (i.e., trends in teacher judgments and actions) develop over time in a deliberate professional education program. In effect, teacher education and well-designed teacher professional development can foster positive changes in disposition.

The second challenge was ready to be tackled, providing a theoretical framework for dispositions. In actuality, this hurdle was easily overcome by attending to the foundational work of the definition. Based in a theory of adult cognition, dispositions should be viewed as deep cognitive structures that can be developed over time and with deliberate educational programming. Three domains of judgment were necessary to illustrate the complete nature of the mentoring and teaching process. First, the teacher/mentor is an epistemologist and instructional manager able to consider various perspectives, especially those of the learners, when solving problems (conceptual domain). Second, the teacher/mentor acts as a representative of democratic values and make judgments based upon principles of social justice and diversity (moral/ethical domain). Finally, the teacher/mentor is self-aware while being responsible for the needs of learners, colleagues, and caregivers (ego domain) (Reiman, 1999; Watson & Reiman, 1999).

Finally, my third challenge was to devise a plan for collecting evidence on teacher dispositions. Considering the need in the field of education for both quantitative measures and qualitative description of dispositions, I followed the suggestion of Yin (2003) and

designed a case study approach to collecting evidence. I was able to integrate a valid and reliable means of assessing each of the aforementioned domains with both standardized measures and rich, think description of how the professional judgments and actions were actualized in classroom and mentoring contexts. This methodology was applied in hopes of answering two main questions:

How does the professional judgment of mentor teachers correspond to their

professional action as they assist in beginning teacher development?

How does the professional judgment of beginning teachers correspond to their

professional action as they address the needs of diverse learners?

Findings and Discoveries

My summary of findings has as much to do with the design of the study as with the data itself and is organized around three emergent themes: the validity and reliability of the coding matrices for each domain, congruence between judgment and action (paired with influence on learners), and the implementation of a five-component model.

Significance of Coding Matrices

First, the decision to choose participants based on a mentor/mentee relationship afforded a unique opportunity to study a path of learning and development that would be ubiquitous in most school settings. There is the mentor who is developing knowledge, skills, and dispositions to assist in beginning teacher development. Then there is the beginning teacher who is developing knowledge, skills, and dispositions to assist in addressing the needs of an ever-increasing diverse group of learners. This relationship, in itself, posed a unique challenge of devising a measurement system that would accommodate both the mentor and the beginning teacher. The quantitative measures of judgment in their original

form were applicable to both the beginning teachers and the mentors. However, the quantitative measure for action (the GIAS) and the matrices for coding qualitative data required adjusting. For this reason, there was a conceptualization that needed to be determined. The term "learner" became paramount as it can describe a mentor learning effective coaching skills, a beginning teacher learning various methods of instruction, and a student in a classroom working to grasp certain skills and understanding. The matrices were now germane for mentors and beginning teachers (and for various other learners if so needed). In terms of validity, data gathered qualitatively through interviews, observations, and artifact analysis proved relatively convergent with the quantitative measures of judgment. Reliability was also measured between two independent raters. Although at a level some may consider moderate, reliability for the initial use of the matrices was impressive at .73. This is exciting news for those interested in gathering evidence on preservice teacher disposition, beginning teacher disposition, or mentor disposition. In terms of policy implementation, the matrices can also be used to assist agents in recognizing existing levels of disposition and focusing attention on supporting development to more complex judgments and actions (Spillane, Reiser, & Reimer, 2002). For example, in teacher education programs, disposition of student teachers could be formally assessed using standardized measures (DIT-2, SCT, and PCM) and informally assessed using the matrices. At the end of the program, dispositions can be reassessed using either or both forms of measurement. Growth or lack thereof will be illustrated and documented within each domain. Results of this finding merge with a recent call for research that "serves as the foundation of professional teacher-education curriculum" (Cochran-Smith, 2004).

Congruence Between Judgment and Action

In the review of literature, I spoke of past studies that had determined a link between judgment and action. Such studies were few and far between in teacher education and as Blasi (1980) indicated, must be viewed in light of the context. Similar findings emerged in this study along with specific details about the nature of congruence and incongruence of judgment and action. Overall, a significant congruence was found between both the mentor and beginning teacher judgments and actions.

Returning to the matrices, judgments were specified by the relative theoretical underpinnings integrated with past research findings. Defined as the step between knowledge and practice, judgment was characterized as decisions made by participants in reference to future or past behavior. For example, decisions made based upon opportunities for collaboration humanistic-democratic views of learner discipline are considered judgments. Action is defined as behavior that can be "conscious and deliberate" or "habitual and automatic" (Katz & Raths, 1985, p. 301). It is explicit and observable. My questions were designed to study how congruent the judgment was with the action, was there a clear connection between the two constructs? The answer was yes, an obvious congruence exists. I examined 18 judgment/action domains (three domains for three mentors and three beginning teachers). Congruence existed at some level for all the cases. Although it is impossible to establish a one-on-one relationship between a specific judgment and corresponding action, trends did exist. For example Logan, as a mentor, made many judgments using advance levels of the three cognitive domains. She was able to consider multiple perspectives and various sources of evidence when making decisions. Her actions revealed similar trends. She adjusted her position when presented with new evidence and

had a tendency to ask for and consider the thoughts and opinions of others. Similar trends were found for participants using less complex systems. As a beginning teacher, Joseph based many judgments in what would maintain the current structure of his classroom climate. Actions displayed by Joseph converged with a need for structure. He was a presenter of knowledge, spending significant amounts of time talking to his students. When students were invited to participate, it was minimal with Joseph regaining control after short periods of time.

Where trends such as these were typical through the data analysis, some incongruence was detected. Case in point, many of Sherry's judgments in terms of instructional choices considered students as having varying learning styles. She saw it as her role to make adjustments to such learners. Many of Sherry's actions exhibited such accommodation; however there were also points of divergence. She would design lessons that were meant to be purely kinesthetic in nature and did not require students to take notes, yet during the lesson presentation Sherry encouraged and at times insisted students record information she was giving. Interpretation of the divergence between some judgment and action lies in the stipulation provided by Loevinger (1997) of the ego domain. Rarely do individuals exist as consolidated within one level of any domain of cognition. What we should look for are trends in judgment and action. The trends in this data set suggest that behaviors tend to be congruent with judgments.

What do these findings mean for teacher preparation and professional development programs? First, it implies a connection between processes of reasoning and ensuing actions. We can understand and possibly predict how a preservice teacher, beginning teacher, or even mentor is going to behave in various educational contexts if we have information on his or

her judgments. However, it is also important to note that to make appropriate assessments and predictions, we need to look at trends, not one-time measurements of judgments. Meaning should be derived from specific descriptors as well as quantitative measures, which can then be examined in terms of action.

Reconceptualization of Disposition

Finally, I found myself taking a closer look at judgment as three cognitive domains. Returning to my definition of judgment as making decisions based on a most justifiable course of action, there seemed to be added components presented by the ego and the conceptual domain that did not actualize as judgment per se, but emerged as independent constructs. I turn to the work Rest and his associates (1999) to assist in describing a reconceptualization of disposition. The authors proposed a model of moral psychology consisting of four facets: moral sensitivity (recognizing and interpreting various viewpoints in light of ill-structured problems), moral judgment (choosing a course of action that is most justifiable), moral motivation (making a decision based on competing self-values), and moral character (taking the course of action based on decision made). Since the judgment and action piece were consistent with my definition, I concentrated my efforts on understanding sensitivity and motivation and found characteristics quite similar to the theoretical assumptions of the conceptual and ego domain. The conceptual domain focuses on the justifications and reasoning about ill-structured problems. This necessitates being able to recognize dilemmas and consider the various approaches and sources of evidence available to addressing the dilemma. Obviously this description is quite parallel to moral sensitivity as defined by Rest and his associates. The theory of ego postulates that individuals make decisions based upon and integration of interpersonal and intrapersonal experiences. Persons

must acknowledge that judgments are made that may compete with personal beliefs or values systems. This is analogous to moral motivation. A final component not addressed by Rest, but emergent in the data was that of reflection or metacognition (Schrader, 1999). Described as an awareness of decision-making processes, Schrader saw metacognition as a tool for understanding what happens between judgment and action. I contest that it is a tool for understanding what happens between various points in the model. For example, what made a person identify certain dilemmas over others? Was the individual aware of the competition occurring between his or her own beliefs and the most justifiable course of action? Reflection encompasses more processes including thinking about actions versus metacognition, which insinuates, "thinking about thinking". Table 6.1 illustrates the reconceptualization of understanding disposition.

Table 6.1: A Five-Component Model of Disposition

Current Four-Component Model (Rest & Associates, 1999)	Other Domains of Cognitive Development	Proposed Five-Component Model
Moral Sensitivity	Conceptual	*Sensitivity*
Moral Judgment		*Judgment*
Moral Motivation	Ego	*Motivation*
Moral Character		*Action*
	Metacognition (Schrader, 1999)	*Reflection*

Table 6.1 starts with a summary of the original four components by Rest and his associates (1999). The next column portrays how the domains used in this study parallel Rest's model. Finally, there is a merge of the two models as seen in the third column. These five distinct components of disposition represented by the last column of Table 6.1 emerged in the case

study participants. I will illustrate using one participant. As a mentor, Linda sustained an average level of sensitivity. She was able to recognize some dilemmas in her relationship with her mentee Joseph (encouraging him to be more self-analytical), however others went unnoticed (his need for more structure and guidance). Although Linda acknowledged the variation of perspectives, she tended to view her opinion as superior because of her experiences. In terms of judgment, Linda also exhibited an average level of decision-making based upon the most justifiable course of action. For example, she felt presenting Joseph with objective criteria was most suitable however, she also included subjective statements so as not to appear critical which relates to her motivation. Linda recognized she had conflicting beliefs and values in terms of presenting data to Joseph. Where her personal ego was inclined to use praise and encouragement, she re-evaluated her position based upon information presented during a program session. In terms of actions, when presenting Joseph with data, Linda's presentation focused on what he did well, even going so far as to contradict one of Joseph's comments that was self-critical. When reflecting on her actions, motivation, and judgment, Linda recognized that she used a great deal of directive mentor talk during her conferences and made a goal to increase Joseph's amount of participation. Her reflection did not reveal recognition of Joseph's needs as a learner for greater amounts of structure in terms of how he could adjust his teaching behaviors.

Use of the five-component model in teacher education, induction, and professional development programs may provide a more complete picture of teacher disposition. It is specific and concrete providing five distinct constructs, which have an effect on mentor and teacher behavior thus influencing the relationships with learners.

Three overarching findings have been discussed: a valid and reliable means of coding qualitative data, congruence of judgment and action, and a five-component model of disposition. Each has unique contributions to the field of education in terms of preservice teacher education, teacher induction programs, and continued professional development. Connections to policy implementation have also been examined. However, all of the answers have yet to be found. In fact, more questions than answers may have emerged from the results of this study.

The Future of Research in Dispositions

Much of research today is guided by its implications for policy, emphasis solely on student achievement, and the use of experimental methodology. While this may be appropriate and have a place in the education profession, a recent article by Cochran-Smith (2004) summarizes a different kind of research that "raises questions about the basic and applied research that ought to serve as the foundation of the professional teacher-education curriculum" (p. 115). It is not to say that these "different questions" do not influence policy, make links to student achievement, or use statistical methods of analysis. What does occur is the development of a more extensive knowledge base for teacher preparation and development based on strands such as the impact of cognition on teaching and learning. This is the path for research in dispositions. More specifically, I have four suggested directions for future study.

1. *How can the coding matrices and quantitative measures of disposition be integrated into the assessment of students enrolled in teacher education programs?* Do the formal (DIT-2, SCT, and PCM) and informal (matrices) measures accommodate the call for assessment of dispositions by bodies of accreditation? Exploration in the

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practicality of the matrices as well as the effectiveness in describing disposition is necessary. Such study should take place in various phases of the teaching career: preservice, induction, and continued professional development.

2. *Are there statistical correlations that exist between the formal assessments (DIT-2, SCT, and PCM) and the GIAS?* Larger samples of both beginning teachers and mentors are needed to determine the statistical correlation between these two measurements. Where trends and patterns were identified, the small sample size precluded the use of such analysis.

3. *What is the impact of the proposed five-component model of disposition on learners (beginning teachers or classroom students)?* Does one component from the model in terms of mentor or teacher disposition have a more significant correlation with the achievement of learners than the other? For example, is there more impact on student learning when a teacher has a highly developed disposition toward reflection or sensitivity? The need for more direct correlations between the five components and student learning is necessary, in addition to questions that have direct impact on mentor or teacher learning and development.

4. *How do the proposed five components of teacher disposition differ across varying contexts?* For example, five of the six the participants in this study were lateral-entry teachers. How do their dispositions differ with teachers graduating from traditional education programs? Other contextual factors include content specificity (mathematics teachers versus reading teachers) or level (elementary versus secondary or even university faculty).

Final Thoughts

When dispositions gained renewed attention in teacher education, initial reactions were characterized by confusion and angst. A plethora of conceptualizations poured through the academy lacking a theoretical foundation on which development and assessment could be built. This study as an exploration into teacher disposition as professional judgment and action set out to answer some of the challenges facing the use of disposition. Evidence was gathered using established quantitative measures and newly designed qualitative matrices. Considering I only used three dyads, I do not expect to generalize any of my findings to the greater population however, I have contributed to body of research possible ways of measuring disposition. The evolution of a five-component model adds specificity to our understanding of disposition as a multi-faceted conception of a teaching professional. It affords teacher educators and leaders of teacher professional development a conceptualization to guide plans for growth and assessment. The work is far from done. Several questions have emerged from the findings; questions that need to be answered in order to establish a formal understanding that directs our use of disposition as a vital link to teacher development.

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APPENDICES

Theoretical Realm

Dispositions are attributed characteristics of a teacher that represents a trend of a teacher's judgments and actions in ill-structured contexts. In reference to teaching, such dispositions are viewed in light of three cognitive domains.

- Moral/Ethical judgments and actions (Kohlberg/Rest)
- Ego judgments and actions (Loevinger)
- Conceptual judgments and actions (Hunt).

CONCEPTUALIZATION

Theoretical patterns include judgments and actions described based upon hierarchical stages of adult development. These patterns are presented in Figures 3.3, 3.4, and 3.5

Analysis of match between theoretical and observed patterns

Observed Patterns

ORGANIZATION OF DATA

Data gathered through

- Cognitive measurements,
- Interviews,
- Field notes/incidental conversations,
- Self-assessments and analysis,
- Video and researcher observations, and
- Reflective journaling.

Observational Realm

Trochim, William M. (1989). Outcome pattern matching and program theory. *Evaluation and Program Planning, 12*, p. 355-366.

Appendix B:
Conditions for Adult Development

Contextualized Learning and Development: An acknowledgement must be made of prior knowledge and learner experiences. It must also be acknowledged that all learners are diverse in their background and needs. Building a rapport with learners can be is a necessary component of development.

New Role-Taking (not role-playing): The learner needs to be actively engaged in a complex new role or helping relationship. Inquiry and reflection that emerges from interaction with real and immediate problems lend themselves to the most significant gains in consciousness and interpersonal understanding.

Guided Inquiry: As a process of both analysis and meta-reflection, guided inquiry can be quite intensive and should be monitored by a more capable other. Guided Inquiry can include performance assessment, dialogue journaling, and ongoing discussion.

Balance: Cycles of action and reflection must remain in balance. Too little or too much time between action and inquiry can result in frustration and a lack of growth. In essence, this entails a complex new role or behavior sequenced with guided inquiry each week.

Support and Challenge: The zone of proximal development as termed by Vygotsky allows the more capable other to create an environment with a balance between supporting the learner and providing optimal challenges. This condition is often viewed as the most difficult of the conditions considering the engagement in a new role alone can be challenging.

Reflective Coaching: An instructional model is necessary for describing how new abilities are fostered in an adult learner. Coaching steps include assessment of prior knowledge and performance, overview of related theory and evidence, demonstration, opportunity for guided practice and feedback, and eventual adaptation and generalization of the performance.
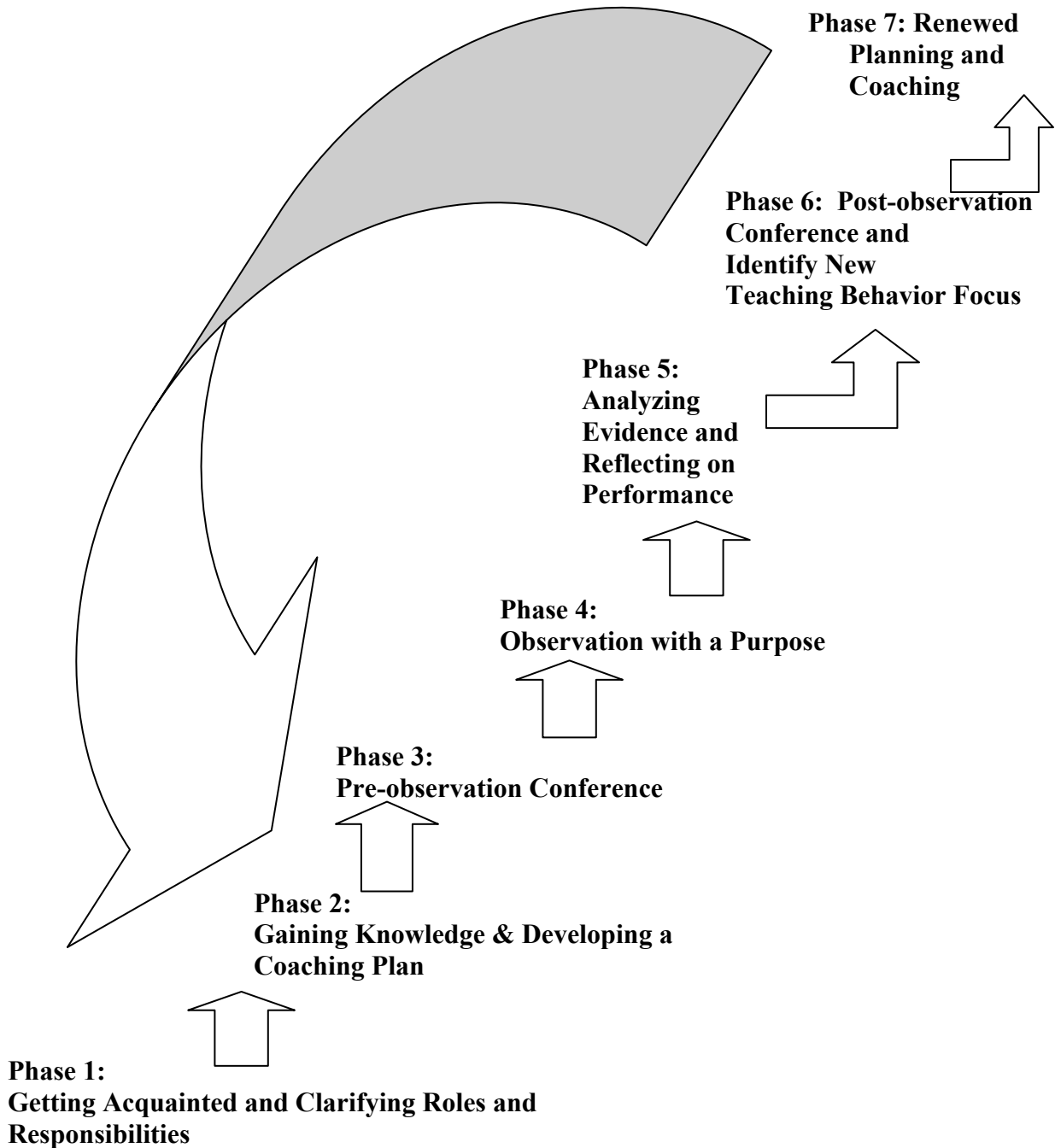
Continuity: Practice that is spaced is superior over that which is massed. Cognitive growth and development requires continuous action and reflection. This usually requires no less than four to six months.

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Appendix C:
Phases of Coaching for Developmental Clinical Assistance

Phase 7: Renewed Planning and Coaching

Phase 6: Post-observation Conference and Identify New Teaching Behavior Focus

Phase 5: Analyzing Evidence and Reflecting on Performance

Phase 4: Observation with a Purpose

Phase 3: Pre-observation Conference

Phase 2: Gaining Knowledge & Developing a Coaching Plan

Phase 1: Getting Acquainted and Clarifying Roles and Responsibilities

Cogan, M. L. (1973). *Clinical supervision*. Boston: Houghton Mifflin Company.

Appendix D:
Flanders Interaction Analysis System

MODE	1. ACCEPTS FEELING
INDIRECT	2. PRAISES OR ENCOURAGES
TEACHER	
INTERACTION	3. ACCEPTS OR USES IDEAS OF STUDENT
	4. ASKS QUESTIONS: Solicitation of information or opinion with the intent that a student answer.

	5. LECTURES
DIRECT	
TEACHER	6. GIVES DIRECTIONS
INTERACTION	
	7. CRITICIZES OR JUSTIFIES AUTHORITY

	8. STUDENT TALK-RESPONSE
STUDENT	
	9. STUDENT TALK-INITIATION
TALK	
	10. SILENCE OR CONFUSION

Flanders, N. (1970). *Analyzing teacher behavior*. Reading, MA: Addison-Wesley.

Appendix E:
Guided Inquiry Analysis System

INDIRECT INTERACTION

ACCEPTS FEELINGS
a. Acknowledges stated feelings
b. Acknowledges implied feelings

REINFORCEMENT
Encouraging statement
Prompts learner to elaborate

ACCEPTS OR USES LEARNER IDEAS
Acknowledges single idea
Acknowledges group of ideas or the underlying assumptions of the ideas

PROMPTS INQUIRY
Asks questions about observed events. Typically comprehension or application level.
Asks questions to encourage analysis, synthesis, evaluation
Presents a dilemma, case study, or ill-structured problem to encourage evidence-based justifications related to broader professional or ethical issues on which experts disagree.

DIRECT INTERACTION

PROVIDES INFORMATION
Offers opinion
Provides evidence, demonstration, or reflective/contextual perspective

GIVES DIRECTIONS
Gives directions related to administrative task.
Directs learner to analyze or reflect on task.

WHEN PROBLEMS EXIST
Offers constructive "I" statement
Offers non-constructive statement

STUDENT TALK

LEARNER RESPONSE
Response to question
Response to feelings

LEARNER INITIATED TALK
Raises a question
Offers an opinion or feeling for consideration (this category can be used to tally small group work)
Offers evidence or justification for a viewpoint
Offers ethical, contextual, or creative perspective

SILENCE OR CONFUSION
Wait time I or II
Confusion

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Appendix F:
Pre-Conference Schedule

I. COMPONENT	EXAMPLE OF RESPONSE

1. Introduction/Purpose
_____ Open with greeting
_____ State Purpose of Cycle of Assistance.
          Select <u>only one:</u>
               a. Improvement of Professional Practice
                    • For new behavioral focus
                    • To continue previous focus
               b. Review progress on any wide-lens form	

2. Feelings a. _____ Ask about novice's feelings b. _____ Actively listen c. _____ Mentor's states feelings	

3. Learning Outcomes and Lesson Plan
a. _____ Ask about Learning Outcomes for students
b. _____ Actively listen
c. _____ Ask about Rationale for selection
d. _____ Actively listen
e.   Discuss lesson plan/actively listen:
     _____ Strategies/activities related to learning outcomes
     _____ Allowances of unique learner needs	

4. Teaching Behavior Focus a. _____ Ask about Teaching Behavior Focus b. _____ Actively listen c. _____ Ask about Rationale for selection d. _____ Actively listen e. _____ Ask about Progress of Coaching Plan f. _____ Actively listen	

5. Data Collection
a. _____ Decide upon Observation instrument for Behavior Focus
b. State that data will also be collected on:
          _____Evidence about learning outcomes
          _____Evidence about classroom management & climate
          _____Other behaviors- effective & needing change	

6. Organizational Plans a. _____ State that all notes will be written and shared b. _____ Discuss logistics, e.g. where to sit to observe c. _____ Ask about classroom rules and procedures	
7. Follow-Up & Closure a. _____ Discuss Post Conference time b. _____ Provide self-analysis sheet c. _____ Ask about any questions d. _____ Close with encouraging statement	

Reiman, A. J. & Peace, S. D. (2002). *SUCCEED at Instruction* [CD]: North Carolina State University College of Education.

Appendix G:
Post-Conference Schedule

COMPONENT	EXAMPLE OF RESPONSE
1. Introduction a. _____ Open with greeting b. _____ Review purpose of conference	
2. Feelings a. _____ Ask about Novice's feelings b. _____ Actively listen c. _____ Mentor states feelings	
3. Learning Outcome(s) a. _____ Novice self-evaluates b. _____ Actively listen c. _____ Mentor shares evidence d. _____ Discuss changes e. _____ Actively listen	
4. Classroom Management & Climate a. _____ Novice self-evaluates b. _____ Actively listen c. _____ Mentor shares evidence d. _____ Discuss changes e. _____ Actively listen	
5. Teaching Behavior Focus a. _____ Novice self-evaluates b. _____ Actively listen c. _____ Mentor shares evidence d. _____ Discuss changes e. _____ Actively listen f. _____ Mentor shares other data	
6. Development of Coaching Plan a. _____ Novice & Mentor decide next teaching behavior focus b. _____ Actively listen c. _____ Mentor and Novice develop coaching plan or schedule time for it d. _____ Ask Novice if she/he has questions	
7. Summary & Closure a. _____ Novice summarizes post conference b. _____ Mentor gives encouraging closing statement	

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I.   Tell me a about the upcoming conference with your mentee.

        Using what the mentor says, "Tell me a little more about
        _____."

II.   When you think about the conference, what concerns you most?

        Using what the mentor says, "Describe the emotions that
        accompany those concerns."

Appendix I:
Follow Up Interview Schedule for Mentors

What did you think about the cycle?

Trace your emotions during the cycle.

What were some of the dilemmas you faced in the cycle? *(If needed, dilemma can be defined*
  as an ill-structured problems with two or more competing options for solution)
  Teacher describes dilemma. Continue with interview.
  If teacher responds that there were no dilemmas, read the dilemma attached as a
    hypothetical situation and use the tense in ( ) for the remaining interview
    questions.

Do you see any moral issues present in the dilemma? Describe them.

How did (would) you go about solving this dilemma?

How did (would) you know when you had reached a solution to the dilemma?

Were you aware of your decision-making processes as you were working to reach a
    solution?

When you think back over the dilemma and the solution you reached, would you change
    the approach you used?
  If "no", continue with interview.
  If "yes", how would it be different?

If someone differed with you on how to solve this dilemma is it the case that one of you
    is right and the other is wrong?
  If "yes", what do you mean by "right"? What makes one opinion right?
  If "no", is one opinion better and another worse?
        If "yes", what do you mean by better? What makes one opinion better?
        If "no", why not?

How is it possible that people have such different opinions about the solutions to
    dilemmas such as these? How is it possible that experts in the field disagree
    about this topic?

King, P.M., and Kitchener, K. (1994). *Developing Reflective Judgment*. San Francisco CA: Jossey-Bass
Publishers.

Schrader, D. E. (1999). Metacognitive reflection in university students. In Mosher, R, Youngman, D. & Day,
J. (Eds.), *Human Development across the life span: Educational and psychological applications* (p. 89-102). Westport,
CT: Praeger

Appendix J:
Follow Up Interview Schedule for Beginning Teachers

What did you think about the lesson?

Trace your emotions through the lesson.

What were some of the dilemmas you faced in teaching the lesson? *(If needed, dilemma can be defined as an ill-structured problems with two or more competing options for solution)*
    Teacher describes dilemma. Continue with interview.
    If teacher responds that there were no dilemmas, read the dilemma attached as a hypothetical situation and use the tense in ( ) for the remaining interview questions.

Describe the moral issues present in the dilemma.

How did (would) you go about solving this dilemma?

How did (would) you know when you had reached a solution to the dilemma?

Were you aware of your decision-making processes as you were working to reach a solution?

When you think back over the dilemma and the solution you reached, would you change the approach you used?
    If "no", continue with interview.
    If "yes", how would it be different?

If someone differed with you on how to solve this dilemma is it the case that one of you is right and the other is wrong?
    If "yes", what do you mean by "right"? What makes one opinion right?
    If "no", is one opinion better and another worse?
        If "yes", what do you mean by better? What makes one opinion better?
        If "no", why not?

How is it possible that people have such different opinions about the solutions to dilemmas such as these?

How is it possible that experts in the field disagree about this topic?

King, P.M., and Kitchener, K. (1994). *Developing Reflective Judgment*. San Francisco CA: Jossey-Bass Publishers.

Schrader, D. E. (1999). Metacognitive reflection in university students. In Mosher, R, Youngman, D. & Day, J. (Eds.), *Human Development across the life span: Educational and psychological applications* (p. 89-102). Westport, CT: Praeger.

Record of Pre-Observation Conferencing Skills-Summary
To be completed after holding Pre-conference

Name of Teacher_____

Name of Coach/Mentor_____

My overall reaction is: Place an X on the continuum.

Not   Satisfied with
Satisfied_____my skills

Why?

On my completed "GUIDE AND SELF-EVALUATION OF PRE CONFERENCE" I was

able to include_____(put in a number) of the supervisory behaviors. I left out the

following activities and need to include these when I work on conferencing during the

practicum of my internship.

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Appendix L:
Mentor Activity II
SELF-ASSESSMENT OF ACTIVE LISTENING
As you listen to the episode, tally each time you hear the levels being used. Include verbatim examples wherever possible. Then, answer the questions that follow.

LEVEL 1 - Paraphrase feelings

LEVEL 2 - Paraphrase content

LEVEL 3 - Door Openers   Acknowledgment
                 "Tell me more."   "Sure." "Right." "Um, um." "Good
idea."

_____

LEVEL 4 - Roadblocks

LEVEL 5 - Happy Hooker

LEVEL 6 - Ships Passing in the Night

Did you actively listen?   Yes _____ No _____

What were the two main levels? _ _____

What should you have done more of? _____

Write other reactions on the back.

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REFLECTIONS ON MY EXPERIENCES AS COACH/MENTOR

Coach/Mentor:

The learnings I gained from being a coach/mentor are… Begin the sentence with: "I learned_____." Write at least 5 statements, but you may write more if you have more learnings.

Trace the feelings you experienced during your cycle as coach/mentor.

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Appendix N:
Beginning Teacher Activity I

SELF-EVALUATION PROCESS: (To be completed by teacher before post conference with mentor/supervising teacher)

Evaluation of Pupil's Achievement of State Objectives: On page 1 of this plan, star those achieved. If you did not achieve objectives, write the reason(s) here.

Class management:

   Interfered --- Supported

      Evidence:

Teaching behavior focused on:

      Goal Statement:

List Behaviors you did to show competency. List those you could have done but didn't.

SUMMARY
1. Check one:
 _____ Competency achieved. New teaching behavior focus:

_____ Competency not achieved. Continue same teaching behavior focus.

2. Write a coaching plan with mentor/supervisory teacher/coach.

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ADAPTING INSTRUCTION FOR DIVERSE LEARNERS

Choose three students involved in your lesson, a "perceived" high, middle, and low achiever. Using a separate sheet of paper for each student, address the following prompts (remember to use confidentiality when referring to students by using a pseudonym):

Describe the learner. Give general information regarding the student as well as reasons why you "perceive" the learner to be high, middle, or low achieving.

In reference to the lesson that was observed for the cycle of assistance with your mentor, collect data including student work samples, behaviors, etc. from the student. Use the information to respond to the questions below. Attach copies of any work samples to your response (remove any names before attaching).

  a. Analyze the data in terms of how the learner was impacted during the lesson.
  b. Reflect on the relationship between your teaching behaviors/lesson content with student learning.

Using your description and the data gathered, propose a plan for adapting your instruction to meet the learning needs of the student.

Johnson, L.E. (2004). *Congruence between professional judgment and professional action as dispositions: A case study of mentors and beginning teachers.* North Carolina State University: Raleigh, North Carolina.
Reiman, A. J. & Peace, S. D. (2002). *SUCCEED at Instruction* [CD]: North Carolina State University College of Education.

Appendix P:
Matrix of Indicators for the Moral/Ethical Domain

MORAL/ETHICAL SCHEMA	JUDGMENTS	ACTIONS
PERSONAL INTEREST SCHEMA	Defines "on task" behavior as being when learner is actively working on assignment given by instructor. Sees role as an authority in the classroom/relationship. Views rules for the purpose of maintaining order. Has an orientation towards need for learner conformity. Considers only personal stake in reference to action. Sees problems as having only one solution.	Measures "on task" through behavioral observations only. Makes instructional strategies without regard to learner perspective or internal motivation. Takes more of a controller role in the classroom/relationship. Becomes easily bothered by socially defiant behavior. Creates rules without learner input. Takes challenges to rules personally. Shows no sensitivity to learners' emotional needs.
MAINTAING NORMS SCHEMA	Views issues from own or from school's viewpoint. Gives some consideration to learner perspective or internal motivation. Considers the purpose of rules and norms is to provide safety and stability especially for those that do not know each other well. Sees laws, rules, and norms as applying to everyone. Views the school in terms of its hierarchical structure (principal-teacher; teacher-student).	Establishes rules that are categorical, clear, and uniform. Obeys rules and norms (and expects others to do the same) out of respect for the social system. Works to maintain the established order in the classroom and school setting. Uses formulas and other proven methods to solve problems. Is willing to try new varied instructional strategies, although they are not part of repertoire.
POSTCONVENTIONAL SCHEMA	Realizes curriculum can be viewed from multiple perspectives. Considers the benefits and consequences of instructional choices. Takes into account a variety of learning styles when planning activities. Holds a humanistic-democratic view of learner discipline. Views rules as being designed to protect certain rights. Considers rules as alterable and relative. Is sensitive to student rights. Makes decisions based upon the context of situations. Self-concept is organized around moral principles.	Allows rules and norms to be shared and scrutinized. Uses individualized instruction to adjust curriculum to the needs of the learner. Encourages decision-making in learners. Makes extensive use of cooperative learning activities. Takes more of a facilitator than presenter role. Employs more interactive instructional strategies. Shows more tolerance of socially defiant behavior. Encourages learners to take part in rule making. Considers various viewpoints in social-conventional situations. Shows a willingness to help students understand and reason about ill-structured problems. High levels of ethical conduct in classroom and school commitments. Teacher is resolved to care about learners, curriculum, and school.

Appendix Q:
Matrix of Indicators for the Conceptual Domain

CONCEPTUAL LEVEL	JUDGMENTS	ACTIONS
PRE-REFLECTIVE	Thinks concretely. Views knowledge as fixed. Views teaching as transmission of facts. Places a high value in structure. Does not tolerate ambiguity well. Has difficulty recognizing own and student feelings. Views events in terms of "right" versus "wrong" only. Is concerned with pleasing others, particularly authorities.	Uses methods of teaching proven to be successful. Expects compliance from students and exhibits compliance as a learner. Exhibits little self-direction. Utilizes lower levels of questions during instruction (Bloom's Taxonomy, 1-2). Does not question authority. Sticks to the stated curriculum. Does not engage in evaluation of evidence. Works better in learning environments with high structure.
QUASI-REFLECTIVE	Has an awareness of difference between concrete and abstract. Has an increased tolerance for variations in classroom or relationship structure. Makes evaluations that are appropriate to assignments. Views facts as different from interpretation. Holds interpretations that are subjective, relative, and situation-sound. Has difficulty evaluating evidence across a variety of perspectives. Beliefs are justified within a particular context.	Uses some variation in instructional methods. Begins to teach for generalization and for skills with less emphasis on learner understanding. Shows some sensitivity to the emotional needs of learners. Exhibit more autonomy and use of self-directed learning. Imitates and applies new teachings without deep understanding of rationale for learners. Utilizes more levels of questions during instruction (Bloom's Taxonomy, 1-4). Acknowledges learner ideas by repeating content.
REFLECTIVE	Thinks abstractly. Views knowledge as a process of successive approximations. Has understanding of appropriateness of various instructional models. Holds a high level of tolerance for ambiguity and frustration. Makes evaluative judgments are made based on objective criteria. Values collaboration. Considers information from a variety of sources when making decisions about ill-structured problems.	Exhibits originality in adapting innovations in the classroom. Is able to employ various teaching models. Shows articulation in analysis of own teaching both in content and feeling. Is able to continuously reflect on experiences, making adjustments when necessary. Utilizes all levels of questions in instruction (Blooms 1-6). Asks for rationale and reasons for directions. Engages in self-directed learning. Works better in learning environments with low structure. Is able to "read and flex" with learners. Evaluates classroom decisions in terms of what is most reasonably based on current evidence and reevaluates when new evidence, perspective, or tools of inquiry become available. Paraphrases and uses learner ideas and feelings.

Appendix R:
Matrix of Indicators for the Ego Domain

EGO LEVEL	JUDGMENTS	ACTIONS
PRE-CONVENTIONAL	Views role of teacher as a presenter of information. Has a need to minimize controversy. Does not perceive problems or recognize need for change. Is wary of collegial relationships. Does not consider long-term goals or ideals. Lacks ability to empathize.	Impulsive and self-protective. Attributes problems to other people. Maintains established rules and school policies. Exploits relationships. Focuses exclusively on self. Has a preoccupation with control and having the advantage. Acts deceptively and is opportunistic.
CONVENTIONAL	Places a high value on conformity to social norms. Is concerned with appearances and social acceptability. Perception of self and others based upon conventional stereotypes. Values niceness, cooperation, and helpfulness. Continues to show concern for adhering to norms and with appearances (concerned with external approval). Has an awareness of individual differences. Considers exceptions and contingencies. Is empathetic to the needs of the learner. Views purpose of education to provide life skills and develop a greater self-awareness. Has a capacity for self-awareness and self-criticism. View long term self-actualization and goals. Sees rules as not absolute. Considers the perspective of others. Views self as responsible for others.	Is often helpful in hopes of belonging. Follows school decisions with blind obedience. Describes emotions in simple language (i.e., glad, sad, mad, scared). Judges self and others in terms of stereotypical roles. Displays beliefs and principles do not match willingness or ability to act on such. Continues to conform to norm although beginning to recognize exceptions. Exhibits a freer flow of expression about self, self-related experiences, and self as reflected in others. Expresses emotion in one-dimensional terms. Offers descriptions that are based on self-evaluated standards or professional identity. Is able to express past feelings with intensity; present feelings are distrusted and feared. Has a tendency to be self-critical or feel excessive responsibilities for learners. Highly values personal or learner achievement in terms or own standards. Evaluates and chooses rules for self. Thinks in terms of polarities (i.e., dependent vs. independent, trivial vs. important) Focuses on goals.
POST-CONVENTIONAL	Considers differences in individual learners. Values interdependence in interpersonal relationships. Views challenges in terms of multiple personal and professional roles. Is able to better understand paradoxical situations. Views process from a whole and from its parts. Is able to assume multiple perspectives. Cherishes personal ties. Has a high level of sensitivity to individual differences. Recognizes the need for learners to construct understanding through discovery. Views reality as complex and multifaceted.	Displays high degrees of flexibility, tolerance, and sensitivity. Is very specific about and able to differentiate personal emotions. Displays interest in growth in multiple roles. Show increased respect for individuality, especially in terms of those that are different from self. Challenges learners to be open to new ideas and fosters curiosity (i.e., creates an environment in which mistakes are acceptable and necessary for growth). Acknowledges and deals with conflict rather than ignoring it. Encourages learners to seek knowledge independently. Vividly conveys emotions through spontaneity, genuineness, and intensity.

*Note: Indicators are purposefully ordered in each cell to indicate a movement from less to more complex judgment or action for each particular level.