

DISSERTATION

ASSESSING DISPOSITIONS IN PRE-SERVICE TEACHERS:
DOES SETTING OR EXPERIENCE AFFECT DISPOSITIONS?
A MIXED-METHODS STUDY

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WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY HEIDI FREDERIKSEN ENTITLED ASSESSING DISPOSITIONS IN PRE-SERVICE TEACHERS: DOES SETTING OR EXPERIENCE AFFECT DISPOSITIONS? A MIXED METHODS STUDY BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

ASSESSING TEACHER DISPOSITIONS IN PRE-SERVICE TEACHERS:
DOES SETTING OR EXPERIENCE AFFECT DISPOSITIONS?
A MIXED METHODS STUDY

The purpose of this study was to determine whether there was a significant difference between the perceived dispositions in pre-service teachers in urban settings versus non-urban settings. It was also the intent of this study to describe the change in perceived dispositions throughout pre-service teachers' internship experiences. Graduate students (N=44) from a teacher education program participated by providing responses to surveys, reflections, and focus groups. Final Assessment (FA) grades were also gathered to validate responses. The nature of self-reported data requires this study to collect both quantitative and qualitative data so that pre-service teachers' responses can be validated with their experience, which influenced the decision to employ a mixed-methods design for this study. A triangulation mixed methods design (QUANT + QUAL) was used. The quantitative analysis used a non-experimental comparative approach. Inductive within deductive coding was used to analyze the journal responses and focus groups. Template analysis (King, 2004) used pre-established codes based on the 10 INTASC Principles and Dispositions Indicators (1992). Themes also emerged inductively and were identified throughout the coding process.

Data were analyzed based on time of response (fall and spring), internship setting (urban or non-urban), and instructional setting (urban or non-urban). No statistically significant changes in dispositions were found between urban and non-urban internship settings. However, differences were found in the qualitative results when instructional

settings were analyzed. The urban setting participants showed preferences for Principles 2: *Child Development and Learning Theory*, 3: *Learning Styles and Diversity* and 5: *Motivation and Behavior*, while the non-urban setting preferred Principles 3: *Learning Styles and Diversity* and 4: *Instructional Strategies and Problem Solving*. Principle 10: *Interpersonal Relationships* showed equal preference among participants in both instructional and internship settings.

Seven out of the ten INTASC Principles showed significant differences over time; five showed decreases in response, while two showed increases. The following principles showed changes: Principle 4: *Instructional Strategies and Problem Solving* increased over time, Principle 9: *Professional Growth and Reflection* also showed an increase, and Principle 7: *Planning for Instruction* decreased. Results from this study will provide policy recommendations for teacher licensing programs on reporting to accreditation agencies and determining what programmatic components help to develop desired dispositions in pre-service teachers.

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CHAPTER ONE: INTRODUCTION AND BACKGROUND

It's time to turn the page on education, to move past the slow decay of indifference that says some schools can't be fixed, that says some kids just can't learn. As President, I will launch a campaign to recruit and support hundreds of thousands of new teachers across the country--because the most important part of any education is the person standing in front of the classroom. It's time to treat teaching like the profession that it is.

- Barak Obama (Take Back America 2007 Conference)

Introduction

The face of American schools is changing rapidly, even faster than projected. According to Bartoli, in the United States, one out of five children lives in poverty and one of every two children of color lives in poverty (2001, p. 47). Furthermore, four out of every ten children in K-12 schools are children of color and two of every ten come from homes where languages other than English are spoken (U.S. Department of Education, 2006).

Sanders and Rivers indicate there is now evidence that "teacher quality is the single most accurate indicator of a student's performance in school" (1996, p. 6). A focus on enhancing academic achievement for disadvantaged children has raised concerns about the lack of teacher quality in low-socioeconomic areas and high-minority schools. The growing population of diverse students in our schools requires us to consider how we will help students to be successful in school. It is up to teacher education programs to train the best teachers possible to help our students succeed; "...Qualified and effective teachers are the most important building blocks for improving student achievement, especially that of at-risk students" (Talbert-Johnson, 2006, p. 151). Institutes of teacher education must identify program components that affect candidates'

“perceptions, beliefs, and dispositions” that enable them to work effectively with diverse students and families that crowd the halls of our urban schools today (Talbert-Johnson, 2006).

In an effort to improve teacher quality, current teacher licensure accreditation agencies such as the National Council for Accreditation of Teacher Education (NCATE), Interstate New Teacher Assessment and Support Consortium (INTASC), and the Teacher Education Accreditation Council (TEAC) require assessment of not only the knowledge and pedagogical skills of teacher candidates but also teacher dispositions: the values, commitments, and professional ethics that influence a teacher’s behavior toward the school community.

In 2000, Taylor and Wasicsko (as cited in Thompson, Ransdell, & Rousseau, 2005, p. 23) concluded that “there is a relationship between teacher effectiveness and the dispositions of teachers.” The current focus on teacher quality encourages teacher educators to delve deeper than ever before into which dispositions must be developed to create quality teachers who are prepared to teach in any setting.

Research Problem

Teacher quality is a high priority given the need to close the achievement gap - especially in urban settings. Peske and Haycock gathered data about the distribution of teachers in Cleveland, Chicago and Milwaukee and found large differences between the number of qualified teachers in the highest poverty and highest minority schools than those schools with few minority or low-income students (2006, p. 1). The reality is that change in the school system in the United States will never transpire if teacher education programs cannot adequately prepare teachers (Talbert-Johnson, 2006). Accreditation

agencies have taken the research on teacher quality seriously and set forth mandates to ensure teacher quality.

Talbert-Johnson also insists that quality teachers possess “appropriate dispositions to address diversity issues at all levels of the educational landscape” (2006, p. 149).

Other researchers have shown there is a relationship between quality teachers and their link to dispositions: “Students learn more from teachers with certain characteristics” (Wayne & Youngs, 2003).

In addition, the internship experience in which pre-service teachers participate is an important aspect in improving the preparation of quality teachers. Past studies have shown that the quality of teachers increases when candidates are given more time in internship experiences. Singh says, “Field experiences...allow teacher candidates to apply and reflect on their content, professional, and pedagogical knowledge, skills as well as dispositions, in a variety of settings” (2006, p. 3).

The setting in which a pre-service teacher takes part can also make a difference in the preparedness when it comes to working with diverse populations of students. When pre-service teachers are provided experiences in realistic settings, beginning teachers are more competent in some aspects of planning, instruction, management, and assessment. They are also more integrated, as well as student-centered, during the processes of planning, instruction, assessment, management and reflection (Castle, Fox, & Souder, 2006, p. 7).

What is not known about teacher dispositions, internship experience and setting, is whether the length of internship experience or setting in which pre-service teachers

participate affects perceived dispositions. With the complexity of teacher preparation and the current focus on dispositions, narrowing the focus to setting and experience will be useful in developing recommendations for teacher preparation, and is the focus of this inquiry.

Purpose of the Study

The state of schools in the United States calls for the preparation of quality teachers in order for students to be successful, especially in urban settings. In addition, current standards (NCATE, TEAC and INTASC) for teacher licensure require assessment of not only the knowledge and skills of teacher candidates, but also teacher dispositions. The purpose of this study was to determine whether there is a significant difference between the perceived dispositions in pre-service teachers in urban settings versus non-urban settings. It was also the intent of this study to describe the change in perceived dispositions throughout pre-service teachers' internship experiences. Results from this study will provide policy recommendations for teacher licensing programs on reporting to accreditation agencies and determining what programmatic components help to develop desired dispositions in pre-service teachers.

The data for this study was collected in the form of surveys, reflections, Final Assessment (FA) grades, and focus groups from the participants. The nature of self-reported data required this study to collect both quantitative and qualitative data so that pre-service teachers' responses could be validated with their experience, which influenced the decision to employ a mixed-methods design for this study.

Research Questions

Researchers in education have linked teacher dispositions to teacher quality (McKay, 1997; Sachs, 2004; Sharp, 2008; Talbert-Johnson, 2006; Taylor & Wasicsko, 2000; Thompson, et al., 2005; Wayne & Youngs, 2003), yet a thorough investigation of literature found no empirical studies linking how pre-service teacher dispositions were affected by internship experience and setting. Therefore, this longitudinal analysis of perceived dispositions in pre-service teachers related to setting and experience formed the basis for policy recommendations to teacher preparation programs.

To study how dispositions develop in pre-service teachers, this research focused on the experience and setting (urban or non-urban). By focusing on the experiences in which a pre-service teacher participates, a clearer understanding of how perceived dispositions might change from the practicum through the student-teaching experience could be gained. The focus on setting helped to determine whether different perceived dispositions were displayed in one setting (urban) versus the other (non-urban).

To study whether pre-service teachers' perceptions of dispositions are influenced by experience and setting, the following research questions were asked:

1. Does experience validate perception of dispositions?
 - a. Do perceptions of dispositions change as a candidate gains experience in the classroom?
 - b. What perceived dispositions are stronger/weaker at the beginning of the candidate's internship experience than at the end of the internship experience?

2. Does setting validate perception of dispositions?
 - a. Does the setting (urban vs. non-urban) influence the strength of the dispositions?
 - b. Does the setting influence the “professional rating” of a pre-service teacher?

Definition of Terms

Cohort – A group of students who are in the Option #3 program at CSU. These students take the same courses at the same time, and participate in the same internship experiences together.

Dispositions – according to the NCATE glossary, consist of:

...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.

Final Assessment Scores – the final composite score given to student teachers at Colorado State University at the end of their internship experience. The score is determined by the mentor teacher and the university supervisor;

INTASC Principles – the principles set forth by the Interstate New Teacher Assessment and Support Consortium (1992) with the purpose of assessing pre-service teachers and programs of teacher education. See Appendix A for the specific list of indicators for dispositions;

Internship Experience – any time that a teacher candidate spends participating in a classroom with a mentor teacher and students. In this study, this definition includes both the practicum experience and student teaching;

Likert-Scale Scoring – the traditional Likert 5-point attitudinal scale, however, a 10-point scale was used in this study;

Mentor Teacher – the designated licensed and experienced teacher with whom a pre-service teacher works. This person evaluates, guides, observes and mentors the pre-service teacher throughout the internship experience;

Mixed-Methods – the use of both qualitative and quantitative data to best answer a research question. Both types of data are collected within the same study and analyzed together to increase reliability and validity;

NCATE – the National Council for Accreditation of Teacher Education;

Option #3 Program – the Professional Development School program at Colorado State University in which master's students earning their teacher's license participate as a group. All courses and internship experience are completed in one year and are done together, therefore, providing a network of support for every member.

Practicum – the time that a teacher candidate spends observing and teaching part-time in a classroom with a mentor teacher and students. In this study, teacher candidates do their practicum experience the first semester of their program;

Pre-Service Teacher – the participants in this study;

Professional Development School – defined by NCATE as: “...innovative institutions formed through partnerships between professional education programs and P–12 schools.” PDS partnerships have a four-fold mission (2008):

1. Preparation of new teachers,
2. Faculty development,
3. Inquiry directed at the improvement of practice, and
4. Enhanced student achievement;

RamCT – the online platform used by Colorado State University faculty and students for communication, collaboration and learning;

Student Teaching – the time during which a pre-service teacher spends as the leader of a classroom, with the guidance of a mentor teacher;

TEAC – the Teacher Education Accreditation Council;

Teacher Quality – according to the National Education Association (NEA, 2010), there are three core areas that are essential to quality teaching: 1) knowing the subject matter; 2) knowing how to teach the subject matter; and 3) understanding how students learn and what it takes to reach them effectively.

Triangulation – in mixed methodology, the research design in which different but complimentary data is collected concurrently on the same topic;

University Supervisor – the faculty member at Colorado State University who works with the pre-service teacher and mentor teacher and observes and evaluates the student according to the standards for teacher licensing in Colorado;

Urban Schools – One or more places and the adjacent densely settled surrounding territory that, together, has a minimum of 50,000 persons. It can also consist of contiguous territory having a density of at least 1,000 persons per square mile. From this description, we can visualize a large number of people living in close proximity (U.S. Census Bureau).

Limitations and Assumptions

For this study, it was assumed that dispositions could be assessed. The instrument used limited the data gathered. Participants self-reported and responded to prompts throughout the study. The nature of self-reported data also assumed that students responded honestly and consistently.

The sample examined was from one teacher preparation program at one university. Each student in the program met admission standards and completed all content work prior to student teaching. All pre-service teachers were required to complete a practicum experience and student teaching. There was no control over the quality of mentor teacher provided to the student, nor the quality experiences encountered

by the pre-service teacher. Participants in this study were allowed to select the location, level (middle- or high-school) and setting (urban or non-urban) of the student teaching experience, which may have been influenced by the innate dispositions in each pre-service teacher.

Delimitations

The study was delimited to CSU students who were earning their master's degrees simultaneously with their Colorado teaching license. Students participated in one of two cohorts: a high school located in a non-urban city in northern Colorado and a high school located in an urban city in central Colorado. The data were taken over two semesters' time: fall of 2009 and spring of 2010. These semesters included a practicum in the fall semester working in the middle schools, and full time student teaching experience in the spring semester.

Investigator's Perspective

I am a former high school mathematics teacher whose passion is in learning and teaching effective teaching practices to maximize student success. In addition, I am employed at Colorado State University in the School of Teacher Education and Principal Preparation and have an interest in preparing teachers to be effective so they may help students attain success in their education. I currently teach a course at CSU in the Professional Development School (PDS) program and am vested in providing the best resources and experiences possible for my students. Since the course is not part of the program for which data were collected for this study, no bias should be present.

With a background in mathematics, I prefer quantitative research. However, some data collected was self-reported by pre-service teacher candidates, so questions may arise about the validity of the results. Therefore, additional data sources were collected so that the findings of this research could be reported with confidence. Qualitative data was used to validate the quantitative findings. A mixed design was used in which the quantitative data were gathered (via a Likert style survey and Final Assessment (FA) scores) to explain longitudinal growth and relationships in teacher dispositions. The qualitative data were gathered (via reflections in response to prompts about teacher dispositions and focus groups at the end of the internship) to explain the nature of the dispositions themselves.

CHAPTER TWO: REVIEW OF LITERATURE

Introduction

With the changing face of K-12 schools in the United States, teacher quality has become the political and social focus for education. Research indicates that the correlation between teacher quality and student achievement is stronger than the one that exists between students' socio-economic status and other background characteristics, and their achievement (Weglinsky, 2002). The National Education Association had defined teacher quality by defining three core areas essential to quality teaching: 1) knowing the subject matter; 2) knowing how to teach the subject matter; and 3) understanding how students learn and what it takes to reach them effectively (NEA, 2010).

Because of the push for quality teachers, programs of teacher education are forced to look critically at the curriculum components that are currently in place. Research suggests that, besides pedagogical and content knowledge, teacher dispositions are important aspects of training and assessing quality teachers. Accrediting agencies for teacher education, such as INTASC, TEAC and NCATE, have taken the research seriously, requiring teachers to have the "knowledge, skills and dispositions" necessary to be effective.

Even researchers who are conflicted about dispositions agree that teacher candidates can profit from instruction and experiences that encourage positive teacher dispositions (Burant, Chubbuck, & Whipp, 2007; Diez, 2007). While research is plentiful concerning teacher dispositions, setting, and internship experience, all empirical research found was isolated to one of these three aspects. It has not been previously known

whether the length of internship experience or setting in which pre-service teachers participate affects the development of perceived dispositions.

Internship experience has been found to be the most important aspect of teacher training (Doppen, 2007; McKinney et al., 2008; Ross, 1986; Singh, 2006), and a variety of settings have been identified to be an important factor in training quality teachers (Epstein, 2005; Epstein and Sanders, 2006; Hedges and Gibbs, 2005; Hoover-Dempsey, Walker, Jones & Reed, 2002; as cited in Curran & Murray, 2008, p. 104). Although the components that could be considered are infinite, it was determined, for this study, to focus on how teacher dispositions are influenced by internship experience and setting.

Teacher Dispositions

Dispositions can be defined as attitudes, beliefs, commitments, ethics, and values (Diez & Raths, 2007; INTASC, 1992; Katz & Raths, 1985; NCATE, 2000; Taylor & Wasiczko, 2000; Thompson, Ransdell, & Rousseau, 2005; Thornton, 2006) towards students, families, colleagues and the community (NCATE, 2000). They can be described as innate qualities (Taylor & Wasiczko, 2000) or ways of behaving (Arnstine, 1967; Katz and Raths, 1985; Ritchhart, 2002). Teachers' ways of behaving vary depending on the circumstance. The quality of the behavior may be repeatable, but the response to any given situation is not (Arnstine, 1967; as cited in Diez & Raths, 2007). Ritchhart attests that these behaviors are not automatic (2002, as cited in Diez & Raths). Katz and Raths label these behaviors as "habits of mind, not mindless habits" (1985, as cited in Diez & Raths, 2007).

Habits of mind have been noted to be the closest term related to dispositions (Arnstine, 1967; Costa & Kallick, 2005; Covey, 1989; Dewey, 1922; Katz & Raths, 1985; as cited in Diez & Raths, 2007). Covey defines habits of mind as the intersection of knowledge, skill and desire (1989, as cited in Diez & Raths). These actions are not intentional, reflective, nor are they behaviors engaged in indiscriminately (Arnstine 1967; Katz & Raths, 1985; as cited in Diez & Raths, 2007).

Some definitions of dispositions have been thrown out because of their link to human biological responses. The term “trait” has been likened to dispositions only to be refuted by Diez and Raths because certain patterns of behavior are observed once a trait has been established (2007). Researchers and psychologists would argue that some traits are linked to biology (such as being an introvert or an extrovert). Freeman states that both introverts and extroverts can be effective teachers and administrators, so defining an effective professional by their traits is not particularly helpful when discussing effective dispositions (Dietz & Raths, 2007, p. 12).

Raths says that the collection of beliefs and attitudes make up a disposition (Dietz & Raths, 2007). It is a summary of the trend of teachers’ actions in context. A teacher has the ability to think about the actions taken in certain situations based on the underlying beliefs, values and attitudes possessed by that teacher: “Dispositions address the gap between our abilities and our actions” (Ritchhart, 2002; as cited in Diez & Raths, 2007).

History of Dispositions

It was not until the mid-1980's that the term dispositions was used as a goal for teacher education by Katz and Raths (as cited in Dietz & Raths, 2007). Prior to this, goals for teachers included knowledge, skills and attitudes (Freeman, 2007, p. 7). The shift from discussing attitudes in teacher education to dispositions was relatively rapid, considering the often slow pace at which teacher education changes. As teacher education programs began considering how to define and assess attitudes, there was discussion about the lack of connection between attitude and behavior (Burke, 1945, 1969; Cook, 1992; Katz & Raths, 1985; as cited in Freeman, 2007). "It is the gap between intention and actual behavior that renders attitudes unsuitable as a domain of teacher education, particularly when attention moves from what one intends to do to actual performance" (Freeman, 2007, p. 6). Less than seven years after dispositions were introduced as a goal for teacher education by Katz and Raths, they were included in the standards for INTASC (1992).

The INTASC Principles and Dispositions Indicators included a well-developed list of 10 principles regarding the dispositions and their relation to teacher candidate performance. The list of Principles can be found in Appendix A. Ten years later, NCATE revised its standards and included the concept of dispositions. Through this revision, the following definition evolved:

(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. 52).

Though teacher educators have considered how to use dispositions to assess pre-service teachers for nearly three decades, it continues to be a major discussion because of the ambiguity of the definition of dispositions and the difficulty in assessing this affective side of teacher candidates (Freeman, 2007, p. 15). Researchers in education, understanding the importance of dispositions, continue to learn about what programmatic components help to develop desired dispositions in pre-service teachers.

Assessing Teacher Dispositions

Experts in the dispositions field contend that there are two issues with assessing teacher dispositions. One is that there is not a clear definition of disposition. Wasicsko reports that research on teacher effectiveness has not provided clear identification of dispositions. He attests that there is “inherent difficulty in evaluating perceptual orientations” (2002; as cited in Thompson, et al., 2005, p. 23). Others such as Balzano and Murray, Taylor and Wasicsko, and Wenzlaff, are concerned that the research literature on teacher dispositions provides little assistance with definitions (Koeppen & Davison-Jenkins, 2007, p. 3; Thompson et al., 2005). Many institutions, for the sake of consistency, choose to define dispositions in accordance to accrediting agencies such as NCATE and INTASC (Mullin, 2003; Rebich & Hopper, 2004; as cited in Flowers, 2006; Schulte, Edick, Edwards, & Mackiel, 2004; Singh & Stoloff, 2008; Wilkerson & Lang, 2007). Raths also states that teacher educators must select a finite set of dispositions in which to assess: “It is difficult to take on some dispositions and not others” (2007, p. 162). Using existing definitions and standards for dispositions not only alleviates the

debate over definitions, it also helps the assessors to define and be consistent about what dispositions to use.

The second issue with assessing dispositions is the “inability to establish consistent norms by which to assess the dispositions of pre-service teachers” (Ginsberg & Whaley, 2003; Taylor & Wasicsko, 2000; Wayda & Lund, 2005; as cited in Sharp, 2008, p. 150). Many institutions have introduced instruments as a means to communicate professional expectations to students as well as having a means for assessment (Sharp, 2008, p. 150). Researchers agree that the assessment of teacher dispositions must be connected to program goals (Katz & Raths, 1985; as cited in Lund, Wayda, Woodard, & Buck, 2007) and deliberately planned and assessed (Goodlad, 2002; Wiggins, 1998; as cited in Lund et al., 2007). Talbert-Johnson takes this idea further and states that “higher education programs [must] design a common, cohesive framework that defines the knowledge, skills, and dispositions that teachers and leaders are expected to possess and apply” (2006, p. 149). Before researchers can begin assessing dispositions, they must agree upon a clear definition for teacher dispositions and create a consistent way of assessing those dispositions. By exploring current assessment practices, teacher educators can begin to formulate consistent ways to assess dispositions in pre-service teachers.

Theoretical approaches to assessing professional dispositions.

In his research, Doug Mullin states that because of the potential high stakes in assessing pre-service teacher dispositions, teacher educators must ensure that their assessments and standards are valid and reliable. In order to inform the decisions made about assessment, he outlines various psychometric approaches to assessing dispositions

as well as the potential results of using this approach for evaluating pre-service teachers, the first of which is the psychodynamic approach (2003, p. 8).

This approach reveals dispositions through personality profiles such as Meyers-Briggs and the MMPI (Minnesota Multiphasic Personality Inventory). These psychodynamic tests “consider dispositions, values and basic life orientation to be dimensions of an individual’s personality” (Mullin, 2003, p. 8). If a teacher candidate were to display (or not display) certain dispositions, Mullins fears that the perception would be that there was something wrong with the student. He also sees this approach as being an invasion of a candidate’s privacy.

The humanistic or existential perspective is Mullin’s second approach outlined (2003). This approach focuses on the philosophical beliefs and the expressed feelings of teacher candidates. Mullins rejects this approach because he considers it to be a “dangerous entryway to political correctness” (p. 9). He fears that if teacher candidates know that what they say about their feelings or beliefs will be held against them, they will say only what assessors want to hear. “Such a system would encourage undesirable characteristics while undermining some of the very values we seek to reinforce” (p. 9), Mullin says.

The third approach in assessing teacher dispositions is the behavioral perspective, which includes the belief that behaviors displayed in the past and present are predictive of future behaviors. Mullins likes this approach because he believes candidates displaying certain behaviors characterized by specific values are more likely to be “disposed” toward displaying the behaviors in the future: “Dispositions address the gap between our

abilities and our actions” (Ritchhart, 2002; as cited in Diez & Raths, 2007). The question is, how do teacher licensure programs assess dispositions? An overview of several ways of assessing dispositions follows, including positive outcomes and negative consequences of each.

Methods of measuring dispositions.

In addition to several methods of assessing teacher candidates, there are also several known approaches to measuring specific dispositions in pre-service teachers. Jung and Rhodes reviewed websites and documents from teacher education programs for approaches to assessing dispositions and found that most methods used in the United States have consisted of techniques that are focused on measuring characteristics of individual teachers (such as teacher morals, work ethics and human relationships) instead of measuring their competencies as professionals (2008, p. 647). Using standards set forth by teacher accreditation agencies is one way to assess teacher dispositions. Standards are a set of statements about what is valued; describing what candidates need to know and must be able to do. Standards also put these values into practice, describing how the knowledge of that value is attained and what actions meet that standard (Ingvarson, 2002; as cited in Harrison, 2007, p. 326). These models tend to be checklists, rating scales, and rubrics correlated with standards such as INTASC (Thornton, 2006, p. 54). Thornton insists that this list of behaviors to be checked off is “difficult to distinguish from actual dispositions” (2006, p. 55).

Professional behaviors methods of assessing dispositions in pre-service teachers are usually a set of behaviors set forth by a group of principals or educators seeking certain professional qualities (such as proper attire, punctuality, attendance, work ethic

and preparation). Thornton considers this list of qualities to be minimal expectations, therefore falling short of “capturing true dispositions” (2006, p. 55).

Selected response methods provide information about the teacher candidate that is based on a selected response from a predetermined set of responses. Wilkerson et al. (2007) include scales such as the Thurstone Agreement scale (Anderson, 1988; Thurstone, 1928), semantic differential scales (Phillips, 1988), Likert scales (Anderson, 1988) or rating scales (Wolf, 1988). A downfall of this type of response is that there is an opportunity for the pre-service teacher to guess or fake the response (Wilkerson et al., 2007, p. 27). The Thurstone scale is recommended by Wilkerson et al. (2007) because the data gathered from that type of instrument is easily disaggregated and interpreted (p. 27).

Observed performance, or “dispositions in action,” focuses on how dispositions are manifested in the classroom by focusing on the behavior and its impact on pedagogy and the learning process (Thornton, 2005; Wilkerson, 2007, p. 30). Thornton claims that this method of evaluating professional teacher dispositions focuses on the connection between the disposition and the action, thus making it more reasonable to assess teaching practices (2005, p. 56). “The idea is that attitudes are embedded in behavior, and if attitudes are difficult to measure, then behavior, although one step removed, reflects attitudes held over the long-term” (Diez, 2006; Mullin, 2003; Freeman, 2007; as cited in Shiveley & Misco, 2009, p. 12).

Projective techniques have been used by researchers to delve into the brains of pre-service teachers. Participants are given a picture designed to evoke a response. These

techniques include the Rorschach test and thematic apperception tests (Walsh, 1988; as cited in Wilkerson et al., 2007, p. 31). Wilkerson et al. claim that responses to these types of tests are often so outlandish that common sense must prevail (2007, p. 31).

Evaluating dispositions using self-reflection often serves as a means for assessing students at the beginning and end of a program. These assessments often take form of constructed response items such as questionnaires (Wolf, 1988; as cited in Wilkerson et al.), journaling (Wilson and Cameron, 2000; as cited in Schulte et al.), interviews (Diez, 2007; Holt-Reynolds, 1991; McClelland, 1978; Miller & Alonso, 1995), focus groups (Diez, 2007; Flores & Alonso, 1995), portfolios (Antonek, McCormick & Donato, 1997; Sherbet, 2003; as cited in Schulte et al., 2004), or case studies (Wasiesko, 2000; as cited in Schulte et al., 2004). These models are believed to provide greater insight to how teacher candidates view themselves and their relationships with others than other models (Thornton, 2006, p. 55). Diez contests that using this method is the closest in “linking responses to evidence” and therefore, is the recommended method for evaluating pre-service teachers by most researchers (2007, p. 196). However, these models are dependent on the honesty of the candidate as well as their ability to write and speak clearly.

Diez contends that all good research uses multiple sources for data collection. No method is without problems when used alone (2007, p. 197). Wilkerson et al. agree: “There is much to be said for using multiple measures at increasing levels of inference to increase the confidence we have in our decisions” (2007, p. 31). Diez also urges researchers to use more than one type of disposition. For example, it is simple to implement and evaluate an assessment on which the teacher candidate fills out a

checklist. She likens this type of easily-measured disposition to the lower level objectives of Bloom's taxonomy: "They are important, but one must move beyond these in order to get to the positive core of what dispositions are about" (Diez, 2007, p. 11). With this research in mind, many assessments have been developed to measure teacher dispositions. It should be noted that the processes for developing instruments to measure dispositions are fairly consistent.

Processes for developing assessments.

In the name of developing valid and reliable assessments that give teacher educators insight about their candidates' dispositions, it is important to think about the process used for developing such assessments. A synthesis of eight resources reveals a list of steps taken to develop reliable and valid assessments. A comprehensive list, as well as an example of the instruments developed by those researchers, follows.

All eight instrument developers (Harrison, 2007; Jung & Rhodes, 2008; Mullin, 2003; Raths, 2007; Rebich & Hopper, 2004; Schulte et al., 2004; Shiveley & Misco, 2009; Wilkerson et al., 2007) insist that the first step is to identify and define the dispositions they were to use. Raths suggests that creating a finite list of dispositions forces assessors to be selective, therefore more clearly defining expectations for teacher candidates (Shiveley & Misco, 2009, p. 11; Raths, 2007, p. 162). Wilkerson, et al. get even more specific about what to define. For example, the purpose of the test is defined, the principles that guide the system (which may mean standards for some), and local factors that may affect the assessment are reviewed (2007).

Generally, the second step consists of planning the actual assessment, which means analyzing the indicators of the dispositions researchers want to include as well as selecting assessment methods at various levels of inference in order to increase confidence on their decisions (Harrison, 2007; Raths, 2007; Shiveley & Misco, 2009; Wilkerson et al., 2007). Rebich & Hopper add a step here to include categorizing the dispositions. They categorize dispositions into professionalism, teaching qualities, and relationships with others (2004; as cited in Flowers, 2006).

In most cases, step three includes the development of the instrument. This consists of drafting the assessment items as well as the directions for the candidates (Wilkerson et al., 2007; Shiveley & Misco, 2009; Raths, 2007). Researchers also include reviewing the items for “applicability to values, domain coverage, and job relevance” (Wilkerson et al., 2007).

The fourth step is the final planning and implementation of the assessment, including developing scoring guides and rubrics, determining how the data will be used, and planning how the instrument will be implemented (Raths, 2007; Rebich & Hopper, 2004; Wilkerson et al., 2007).

Step five is the analysis of data, including analysis for reliability and validity as well as fairness, utility and conscientious implementation of the instrument (Wilkerson, et al., 2007). Very few researchers include this step as important. Ironically, some cite this as a reason for invalid or inconclusive results of their studies (Buss & Craik, 1983; as cited in Raths, 2007, p. 157; Rebich & Hopper, 2004; as cited in Flowers, 2006).

The following examples include assessments that have been designed using one or more of the steps previously outlined. It should be noted that each instrument's design was based on the definitions and constructs included in the INTASC principles.

The Clinical Experience Rubric (CER) was designed by Rebich and Hopper (2004) to measure teacher dispositions during their clinical experience. For the sake of using a given definition and having dispositions defined, the INTASC standards and principles were used. Rebich and Hopper were reluctant to encourage others to use this rubric as a sole indicator for making decisions about pre-service teachers because of the lack of internal consistency (Flowers, 2006, p. 484).

The Eastern Teacher Dispositions Index (ESTDI) is based on existing definitions or educator dispositions, existing indices of dispositions as well as on INTASC principles (Combs, 1969; Koeppen & Davidson-Jenkins, 2004; Thomposn, Randsell, & Rousseau, 2004; Wasicsko, 2002; as cited in Singh & Stoloff, 2008).

An instrument also designed to measure teacher dispositions, called the Teacher Dispositions Index (TDI), was also based on the INTASC standards. After being reviewed for validity, it was found that the items measured two different constructs: a "student-centered" dimension, and a "professionalism, curriculum-centered" dimension. This is the only instrument found that delineated the included dispositions (Schulte, et al., 2004), and was the first known quantitative instrument to assess teacher dispositions (Barton, Andrew & Schwab, 1994; Cudahy et al., 2002; Keirse, 1998; Schaffer, 2003; as cited in Schulte et al., 2004, p. 4). This instrument was found to be valid and reliable.

Programmatic comments and recommendations about assessing dispositions.

Researchers and educators in the field contend that defining dispositions and finding a way to assess them are two major challenges. Other challenges that exist in assessing teacher dispositions are somewhat programmatic, stemming from the lack of reliability in assessing teacher dispositions. For example, because of the lack of clear definition of dispositions, the resulting data are subject to a great deal of interpretation and inference (Shiveley & Misco, 2009, p. 13). Shiveley & Misco also proclaim that the long-term success of a program will depend on how accurately teacher candidates are assessed and the support that they receive throughout their program (2009). The reliability and validity of assessing teacher dispositions will determine the degree of credibility for the program (p. 13). Mullin adds: “It is critical that the decisions be based upon assessment processes and standards that have high levels of validity and reliability” (2003, p.8).

Because of possible reliability issues in the assessment of pre-service teachers, programs must be cautious about the decisions that are made in regards to their students. Dispositions must be clearly defined and consistently articulated throughout a program so that students have a fair chance at remediation if necessary (Shiveley & Misco, 2009, p. 12). A suggested timeline for integrating dispositional assessments into a program is provided by Shiveley & Misco (2009). It includes an initial assessment for admission (which also provides a baseline for data), logs kept during field experience to assess reflections, and other assessments, assignments and case studies throughout the program. An assessment would be given during the student teaching experience, and as an exit

exam to determine dispositional growth and collect aggregate data for the program (p. 12).

While the assessment of dispositions continues to be debated because of lack of clear definition and specific dispositions named, researchers continue to advocate for including dispositions as an assessment and tool in training pre-service teachers. It is believed that positive dispositions can be developed by the experiences provided to the pre-service teacher (Burant, Chubbuck, & Whipp, 2007; Diez, 2007; as cited in Thompson & Franklin, 2009).

The Effect of Experience on Teacher Dispositions

There is little evidence that dispositions can be developed through either instruction or experience. Some researchers claim that dispositions are somewhat based on beliefs, or an innate part of the human psyche, or may even be developed over a long period of time. This claim makes it unrealistic to believe that dispositions can be influenced within the timeframe of a teacher education program (Haberman, 1995; Harrison, McAfee, Smithey, & Weiner, 2006; Raths, 2001; Shechtman & Stansbury, 1989; Wasicsko, 2005; as cited in Boyce, 2008, p. 5). Ironically, such a stance seems to counter the idea that all students can learn, which is a disposition named by NCATE as a quality of an effective teacher (Boyce, 2008, p. 5).

Research has shown that experienced and beginning teachers sometimes regard their field work in the schools as the most powerful component of teacher education (Doppen, 2007, p. 54; McKinney et al, 2008; Ross, 1986; Singh, 2006). Others claim that the combination of coursework, methods courses, the internship experience, and

strong mentoring assist pre-service teachers in developing strong student-centered beliefs (Doppen, 2007, p. 56).

Researchers contend that field experience is not the only experience that affects teacher dispositions in pre-service teachers. Some believe that by providing students with opportunities to interact with parents, teacher education programs can transform students' perceptions of parent/professional collaboration (Epstin, 2005; Epstein and Sanders, 2006; Hedges and Gibbs, 2005; Hoover-Dempsey, Walker, Jones & Reed, 2002; as cited in Curran & Murray, 2008, p. 104).

Others believe that explicit instruction about specific dispositions can affect factors such as multicultural awareness and moral/ethical contexts (Dotger, 2010, p. 806), empathy, patience and tolerance (Malone, Jones, and Stallings, 2002; as cited in Singh, 2006), or just general dispositions (Boyce, 2008). The following section explores various studies conducted on the development of teacher dispositions through various settings and experiences.

Experiences in teacher education.

INTASC Principles include fostering relationships with parents as a standard for pre-service teachers. Most teacher education programs do not provide opportunities to develop dispositions to foster relationships with parents (Curran & Murray, 2008, p. 104). However, Curran and Murray conducted a mixed-methods study that embedded parents of special needs students in a course designed for students seeking licensure in special education. The data concluded that the alternative teaching and learning techniques offered to the pre-service students had a significant effect of student dispositions and competencies related to parental and professional partnerships (2008, p. 116). A second

study related to parent relationships was conducted by Dotger in 2009. He wanted to know if pre-service teachers' "awareness of and sensitivity to multicultural and moral/ethical contexts" could be developed by simulating parent/teacher conferences. The resulting data showed that pre-service teachers increased their multicultural awareness, especially when working with parents in support of their students. Dotger summarizes his findings as follows: "Their awareness and sensitivity began to inform their decision-making processes associated with ethical dilemmas" (2010, p. 811).

Other factors have been identified as having an effect on teacher dispositions. These include conducting simulations within teacher education programs and including service learning programs within the pre-service teachers' training. Metcalf, Hammer and Kahlich compared experiences of teacher candidates who participated in role playing and simulated teaching, with candidates who did their teaching in a public school. No difference was found in relation to organizing instruction. However, there was a significant difference in identifying and explaining critical pedagogical events in case studies with the students who participated in the simulation. Due to small sample size, using a convenience sample, and experimenter bias, these results should be interpreted with caution. In addition, the questionnaire used in this study has not been tested for reliability or validity (1996; as cited in Singh, 2006, p. 5). A different type of study conducted by Malone, Jones and Stallings included a service-learning tutoring program. Researchers found that participating students developed empathy, and gained tolerance and patience (2002; as cited in Singh, 2006).

Time spent in internship.

As mentioned earlier, short-term experiences may not be effective in developing teacher dispositions in pre-service candidates. As an answer to that issue, due to the original work of the Holmes Group and John Goodlad, Professional Development Schools (PDS) have emerged as a way to help teacher candidates gain more realistic experience during their preparation (McKinney S. E., Haberman, Stafford-Johnson, & Robinson, 2008). This initiative, originally focused on urban reform, lies in creating partnerships among the teacher candidate, the university, and the public school. The idea of this reform is to increase the responsibility of the partnerships to increase teacher quality and retention and to increase the time pre-service teachers spend in actual classrooms working with students (The Holmes Group, 1990; as cited in McKinney et al., 2008). The following literature supports this movement of teacher education reform.

Researchers McKinney, Haberman, Stafford-Johnson and Robinson sought to determine the difference between characteristics in teachers after completing a PDS compared to a traditional setting. No differences were found in this study, which may be due to the fact that the actual internship experience was considered to be short-term (2008, p. 68). A study by Houston concluded that students working in a PDS internship spend more time with students, working together and interacting (1999; as cited in McKinney et al., 2008). This may be one reason that the study conducted by Fountain noticed significant differences in teacher candidates' efforts to collaborate with peers, to believe in the capabilities of all students, and to understand outside factors that influence teaching and learning when compared to student interns who experienced a traditional setting (1999; as cited in McKinney et al., 2008).

Other research about the effects of a PDS on pre-service teacher dispositions focuses on the actual dispositions themselves. A study conducted by Reynolds, Ross and Rakow recognized that pre-service teachers in a PDS were more confident and, because of the longer placement in a PDS, were more engaged in their self-reflection (2003, as cited in Singh, p. 7). In addition, researchers Castle, Fox and Souder found that a PDS produces teachers who are more confident in aspects of planning, instruction, management and assessment. They argue that the teacher candidates are more integrated with their students, resulting in being more student-centered while planning, teaching, assessing and managing students, as well as being more reflective about their own teaching (2006; as cited in Singh, 2006).

Research has shown that some settings, in addition to experience, affect the development of dispositions. A 2006 study by Andrea Stairs (p. 61) included teacher candidates in a PDS and in an urban setting. Stairs concluded that most students reevaluated their assumptions about urban schools and students because of their immersion in the school. Sixty percent of the students immersed in this urban setting reported increased interest in teaching in an urban setting when finished with their program (p. 63).

While most studies show increased development of various dispositions in teachers involved in Professional Development Schools, few can confirm why, other than that pre-service teachers spend more time with students and the community during their experience. Castle et al. establish that there is a developmental pattern for beginning teacher. First, teacher candidates focus on their own performance, then shift focus to students' performance. The researchers believe that, because of their extended internship

experience, PDS students are further along this developmental continuum than their peers (2006; as cited in Singh, 2006, p. 7).

Summary and Recommendations.

Teacher education programs continue to learn about what programs and components of programs affect the growth of dispositions in pre-service teachers. They have learned that there are certain specific dispositions that can be affected by various experiences. When considering program components that affect teacher dispositions, researchers are adamant that programs must be thoughtful and deliberate about not only the experiences of their students, but also how their students are supported. They insist that thoughtful reflection must also be included within the teacher candidates' experiences. Some researchers confirm that dispositions, whatever they may be, can be developed through "carefully constructed challenges offered in the context of a supportive, collaborative, and reflective learning environment" (Curran & Murray, 2008, p. 116). Parkison adds that in order to help teacher candidates make connections between theory and the practice they observe in the K-12 classroom, teacher educators must provide "systematic and intentional" field experiences (2008, p. 29). The sentiments by these researchers are echoed by Grisham, Laguardia, and Brink (2000; as cited in Singh, 2006, p. 5). They found two variables that make clinical experience effective: 1) Providing more than one field experience, and 2) having university faculty and cooperating teachers supervise candidates. In addition, researchers conclude that by creating cognitive dissonance for students, reflection and discussion were "effective in creating a learning environment in which perspectives were transformed (Boling, 2007; Brown, 2006; Eisen, 2001; King, 2002, 2004; as cited in Curran & Murray, 2008, p. 104).

Specific dispositions (or types of dispositions) are affected by various structures put into place by teacher education programs. Those programs which include parents or community enhance a pre-service teachers' disposition to communicate and collaborate (Curran & Murray, 2008; Singh, 2006), as well as increase empathy, tolerance and patience (Malone, Jones, and Stallings, 2002; as cited in Singh, 2006). Simulations and role-playing situations assist teacher candidates in developing professional dispositions, such as confidence, teaching strategies, classroom management, and assessment (Metcalf, Hammer & Kahlich, 1996; Rock & Levin, 2002; Castle, Fox, & Souder, 2006; as cited in Singh, 2006). Teacher candidates who engage in Professional Development Schools seem to develop dispositions that are seen to be more student-centered. Qualities such as efficacy for students, a deeper understanding of socio-economically diverse students, and the developmental stages of learning of their students are included as student-centered (McKinney et al., 2008). Researchers attribute this to the extended amount of time PDS students are involved in a school setting and developmental stages of beginning teachers. In addition, those teacher candidates who did internships in an urban setting were more inclined to want to teach in an urban setting (Stairs, 2006). Stairs concludes that by presenting urban experiences to PDS students, they begin thinking about career possibilities that they would not otherwise have considered, which also may contribute to increasing teacher retention in urban schools (p. 64).

While this literature supports the idea that teacher dispositions can be developed, there are still many questions about the assessment of dispositions. Burant, Chubbuck, and Whipp contend that existing research may not be valid, considering the “inappropriateness of attempting to measure and quantify what may not be measurable

or even knowledgeable” (2007; as cited in Boyce, 2008). Researchers also discuss the challenge of developing a list of what seem to be infinite dispositions. Also, some question whether dispositions are equal in importance. Boyce asserts: “A pre-service teacher can display fifty-one assessed qualities and be seriously lacking in an unidentified one, a stark reminder that evaluating dispositions is not an exact science” (2008). Research must continue to explore what dispositions are important in preparing effective teachers, as well as how to effectively assess those dispositions.

In addition, researchers must continue to investigate the development of teacher dispositions. Preliminary analysis of the research shows that dispositions can be purposefully developed. The question that remains is how far can teacher education programs go to change a candidate’s behavior? “Further research is needed to investigate the degree, direction, and amount of change [in dispositions] affordable to pre-service teachers,” Boyce says (2008, p. 62).

In addition to the experiences in which teacher candidates participate, researchers believe that teachers who work with diverse students may develop different types of dispositions.

Urban vs. Non-Urban Settings and Teacher Dispositions

Teachers who work with diverse students may develop a different set of dispositions because of the various needs of their students. The following statistics paint a clear picture of the types of students in urban and diverse settings. The largest 66 urban school districts enroll 15% of all students in the United States (7.1 million students total). Of this group of students, 78% are minority students (27% of US population) and 61% are students considered to be of poverty status (as determined by eligibility of free and

reduced lunch). In addition, 14% of students in these schools have Individualized Education Programs. In 2005, 31.8% of these students came from homes in which English was not spoken (Council of the Great City Schools, 2009). The growing population of diverse students in our schools requires teacher educators to consider how they will help K-12 students to be successful in school.

Garza (2009, p. 298) emphasizes that each ethnic group of students' point of view is unique. Teachers must understand that each student has a distinct perspective, and be responsive to each student's background and experience. Based on this theory, it may follow that different dispositions are more frequently used by effective teachers in different settings. A synopsis of studies from the teacher education field based on teacher dispositions from both non-urban and urban environments, followed by a comparison of effective dispositions displayed by teachers in an urban setting versus a non-urban setting will be examined.

Thompson, Ransdell and Rousseau (2005, p. 25) reported in their study the aspects that have been suggested as general characteristics of effective teachers include respecting students (McKay, 1997; Thibodeau et al., 2003), being enthusiastic (Minor et al., 2002) and having high expectations for students (McKay, 1997). Effective teachers motivate students (Bohn et al., 2004), are aware of socio-cultural differences (Sachs, 2004), are effective communicators (McKay, 1997; Sachs, 2004; Thibodeau et al., 2003), and act professionally and ethically (Minor et al., 2002; Sachs, 2004; Thibodeau et al., 2003). In addition, Kathryn Sharp (2008), after reviewing current research, compiled the following list of descriptors to describe appropriate teaching dispositions: fairness (Evans, 2002; NBPTS, 2002; NCATE, 2001), being democratic (Evans, 2002; NBPTS,

2002; Taylor & Wasicsko, 2000) empathy (Major & Brock, 2003; Ryan & Alcock, 2002; Suarez, 2003), enthusiasm (Erickson et al, 2005; Taylor & Wasicsko, 2000), thoughtfulness (NBPTS, 2002) and respectfulness (Evans, 2002; Evans & Nicholson, 2003; NBPTA, 2002; Wagner, 2001; Wayda & Lund, 2005).

An analysis completed by Garza (2009, p. 302) revealed white students' perceptions of their relationships with their teachers. The following research was included in his analysis: In a study by Thweatt and McCroskey, student responses revealed that the more attentive teachers were, the more students trusted them and viewed them as caring teachers (1998). In addition, Teven concluded that there was a correlation between a teacher displaying a friendly disposition and students perceiving that teacher as caring (2007). Similarly, Wentzel found that when students perceive that they have a caring teacher, the idea of a supportive relationship is reinforced, in turn, promoting the social and emotional growth of students (1997).

Noddings indicated that most people can remember an influential teacher and why that teacher made a difference (1995; as cited in Koeppen & Davison-Jenkins, 2007). The responses included some quality of caring, of social context (Peterson, Wilkinson, & Hallinan, 1984), and of "community" (DuFour & Eaker, 1998). Other dispositions narrowed down by Koeppen and Davison-Jenkins include: continuous learning, cooperation and collaboration, listening, respect, professionalism, and reflection. These descriptors were obtained by student, teacher and evaluator points of view (2007, p. 36).

Through analysis of current research, 27 identifying attributes related to effective teaching in general were found. The most common dispositions named (with the most commonly cited disposition first) were:

- Respect (Garza, 2009; Koeppen & Davison-Jenkins, 2007; Thompson, et al., 2005, 2007; Wright, 2006;);
- Building caring relationships (Garza, 2009; Thompson, et al., 2007);
- Enthusiastic (Garza, 2009; Koeppen & Davison-Jenkins, 2007; Lund et al., 2007; Sharp, 2008; Thompson, et al., 2005; Wright, 2006; Thompson, et al., 2007);
- Empathetic/caring (Garza, 2009; Koeppen & Davison-Jenkins, 2007; Sharp, 2008; Thompson, et al., 2007; Wright, 2006);
- Collaborative (Koeppen & Davison-Jenkins, 2007; Lund, et al., 2007; Sharp, 2008);
- Aware of socio-cultural differences (Lund, et al., 2007; Sharp, 2008; Thompson, et al., 2005).

As teacher dispositions from a non-urban setting are compared with those deemed important in urban settings, Talbert-Johnson emphasizes that students from diverse backgrounds may rely more heavily on teachers than their middle-class, white peers. They do not tend to be successful in school when they do not like their teachers (2006, p. 151). The following research supports the idea that teachers in urban settings may play a different role for their students from those in non-urban settings.

Dispositions in Urban Settings.

Several studies have been conducted in urban settings. The following is a synopsis of how dispositions are perceived by students and teachers in urban schools. A study including a majority of African American students reinforced the importance of a caring relationship (Hayes et al. 1994; as cited in Garza, 2009). Teachers in this study were perceived by students to provide affirmation, create an effective learning

environment, and believe that all students could succeed. A similar study by Nelson and Bauch included 88 African American students that named characteristics of a caring teacher. The list of teacher behaviors included setting high expectations, giving encouragement, creating learning tasks that were challenging, providing assistance, and building relationships (1997; as cited in Garza, 2009). Garza reports that the majority of the studies reviewed about successful teaching in urban schools named relationships as the most important aspect of a successful classroom in the urban environment (DeJesus & Antrop-Gonzalez, 2006; Ferreira-Bosworth, 2001; Franquiz & Salazar, 2004; Garza, 2009; Hayes et al., 1994; Letts, 1997; M.D. Nelson & Bauch, 1997; Pang, 2005; Pizarro, 2005; Valenzuela, 1999; Wentzel, 1997).

Another study involving urban students and teachers reported that students learned more from teachers who communicated with them, were available for help, let them collaborate, trusted them, and had high expectations for them (Thornton, 2006, p. 60). Because of the difficult nature of assessing dispositions, Thornton observed “successful” urban teachers in order to learn about dispositions in action. She states, “instead of coming from an *a priori* notion of what makes for the best dispositions, this approach comes from observations of teachers in practice and what transpired in the classroom. This study suggests that dispositions in action can be evidenced and documented through examining classroom discourse” (2006, p. 67). The overarching themes of the entire study, based on feedback from students, pre-service teachers, and in-service teachers, were relationships, support and expectations.

Thorough analysis of research conducted on successful urban teaching revealed 17 critical dispositions related to student success in urban schools. Two dispositions were overwhelmingly named. They were:

- Caring relationships (Bartoli, 2001; Garza, 2009; Irizarry, 2009; Talbert-Johnson, 2006; Thompson et al., 2005; Thornton, 2006) and
- Commitment/availability to students and community (Bartoli, 2001; Garza, 2009; Thornton, 2006).

Other frequently named dispositions important in urban settings were:

- Possessing democratic ideals (Bartoli, 2001; Thornton, 2006);
- Empowering students (Bartoli, 2001; Thornton, 2006);
- Respect for students' abilities (Bartoli, 2001; Thornton, 2006);
- Resourcefulness (Bartoli, 2001; Garza, 2009).

Comparisons.

The previous analysis displays some interesting outcomes in relation to effective teacher dispositions between urban versus non-urban settings. One major similarity is that students are more successful when they can form caring relationships with their teachers. Perez reports (as cited in Garza, 2009) that a caring teacher is a critical source of motivation for students - especially when those students are in danger of failing or are disengaged from school already.

In a study by Wentzel, a group of students were asked about their perceptions of a caring teacher in relation to their motivation. Students reported that the presence of a

caring teacher who knew them well lent itself to the teacher responding more effectively to students' needs, therefore promoting their growth, both socially and emotionally, and therefore increasing motivation (1997; as cited in Garza, 2009).

Major differences in the dispositions cited as important in urban settings versus non-urban settings include more student-centered actions such as being available to students and committed to students and the community, organizing a democratic classroom, empowering students, respecting students' abilities, and being resourceful. Talbert-Johnson suggests reasons students from an urban setting seek different qualities from their teachers: "Because African American students and other diverse students have limited access to knowledge and resources...they face persistent and profound barriers to educational opportunities" (2004 p. 149).

Teachers displaying the above qualities can be great role models for students because they can model inside their classrooms what some students may never experience. They may also be seen as an extension of a student's family. In a Latino family, especially, someone who provides support and assistance with personal matters, becomes "another human resource outside the home environment," and thus is seen as part of the extended family (Nelson & Bauch, 1997; as cited in Garza, 2009). Nelson and Bauch found that Latino and African American students identified that teachers who provided academic support also demonstrated caring (1997). This was deemed by the researchers to be more critical for diverse students than for white students.

Dispositions of effective teachers in the non-urban setting generally are centered on the professional aspects of teaching. These include respect, enthusiasm, collaboration,

and awareness of differences (socio-economic). Koeppen and Davison-Jenkins say that teachers share their professional experiences, mostly related to instructional strategies and classroom management, with pre-service teachers (2007, p. 80). While useful, these strategies are merely skills-based. They can (and are) taught within the university setting along with the knowledge to teach specific content.

The synthesis of available literature leads to the conclusion that students in non-urban settings value professionalism-centered dispositions, while student-centered dispositions seem to be more valued by urban students. Koeppen and Davison-Jenkins contend that teaching is a demanding profession. If teachers have energy to improve their teaching identity, they tend to focus on elements related to knowledge and skills while ignoring the dispositions required to be truly effective (2007, p. 91). Could it be that students in non-urban settings need less from their teachers? Is it possible that teachers in these settings have not taken teaching to its full potential? Garza contends that if we show pre-service teachers examples of what students view as critical to creating a classroom that fosters relationships and establishes a community of caring, we can only enhance their pedagogical knowledge and skills and understanding of students' needs (2009, p. 318).

The findings above are merely a synthesis of available studies. No empirical studies comparing dispositions of urban versus non-urban teachers were found. Further empirical research is suggested to confirm these preliminary findings.

Conclusion

Researchers and educators are unclear about how far measuring dispositions can go. Some question whether dispositions are unique to specific levels (early childhood, elementary, middle, and high school), or even by content (Shiveley & Misco, 2009, p. 14). Raths contends that educators need to learn more about how dispositions are learned and strengthened, and to what degree (2007).

Jung and Rhodes (2008) believe that a well-designed and implemented assessment could influence larger factors than just teacher candidates. Programs strengthened by data quite possibly could influence the teacher shortage. They contend that dispositional indicators would reveal how disposition is linked to “teacher burnout, the lack of teaching longevity and teacher quality” (p. 656).

Finally, researchers Jung and Rhodes believe that the examination of teacher dispositions will spur on discussions among researchers and educators about cultivating specific dispositions that will assist our future generation of teachers to become “competent and effective professionals in the twenty-first century” (2008, p. 656).

This synthesis of research is intended to be used for two purposes. First, programs in teacher education must identify the dispositions that are important to teach all students. More research is necessary to “identify program components that can affect candidates’ perceptions, beliefs, and dispositions relevant to working with a range of diverse students” (Talbert-Johnson, 2006). Teacher candidates rarely know what type of students or school they will ultimately encounter, so it is imperative that they are prepared for any setting.

Second, national accrediting agencies such as INTASC and NCATE stress the importance of teacher candidates possessing appropriate dispositions as well as the knowledge and skills to be effective teachers. The lack of definition makes assessment of dispositions difficult. Sharp contests that assessing teacher candidates' dispositions can only happen effectively when teacher preparation institutions establish consistent norms (2008). Further work and research is required to solidify a definition and an effective means of assessing teacher dispositions.

Lund et al. (2007) suggest additional questions related to future research on teacher dispositions: Are all dispositions of equal importance? Can some dispositions be identified as prerequisites for admission into teacher education programs? Can teacher dispositions be taught to candidates as they progress through their programs? The answers to these questions lie in formulating clear definitions of teacher dispositions, identifying important dispositions in all settings, and creating effective means for assessing teacher dispositions.

Although research has been conducted on dispositions displayed by effective teachers, internship experiences in various amounts of time, and various settings for teacher preparation, no empirical research could be found combining these aspects of teacher education thought to be effective.

For this reason, the research included in this dissertation is significant. Isolating programmatic components in teacher education such as effective teacher dispositions, time in internship experience, and setting of internship, is still complex, but the

combination of these components has the potential to inform teacher preparation practices significantly.

CHAPTER THREE: METHODOLOGY

Rationale and Evidence for a Mixed Method Approach

The purpose of this study was to investigate whether perceived dispositions in pre-service teachers were influenced by experience and setting (urban versus non-urban). The nature of self-reported data required this study to collect both quantitative and qualitative data so that pre-service teachers' responses could be validated with their experiences. This situation influenced the decision to employ a mixed-methods design for this study.

The mixed methods triangulation design (QUANT + QUAL) required the gathering of qualitative and quantitative data at the same time (Cresswell & Plano-Clark, 2007). One interpretation of triangulation was derived from the navigational process of taking bearings on two landmarks to locate one's position: "The transfer of the notion of triangulation from trigonometry to the realm of mixed methods research [seems] to have transformed it into a somewhat fuzzy idea with a variety of possible meanings" (Erzberger & Kelle, 2003; as cited in Hammersley, 2008). Hammersley states that this type of triangulation design is associated with three features that are not critical to research. The first, the idea that validating (rather than developing) interpretations is what is most important in research; second, the assumption that triangulation can provide absolute certainty; and third, the treatment of some sources of data as superior to others in general terms. Hammersley notes:

In its original formulation, triangulation was associated with a fallibilistic conception for inquiry, one which denies the possibility of absolute certainty and does not treat any source of data as having priority. The assumption was that only by comparing data from different sources could we try to determine what is a reliable basis for inference. Those who reject this kind of triangulation must either insist that some single source of data are always reliable, or deny that research involves the pursuit of empirically grounded knowledge (2008, p. 24).

The design of this study followed the format of the original formulation of triangulation; therefore, Hammersley's assertion that no critical elements of research design are being violated were used. Cresswell and Plano-Clark clearly establish the usefulness of triangulation designs. They write that triangulation is "the most common and well-known approach to mixing methods" (2007, p. 63).

The quantitative analysis for this research used a non-experimental comparative approach. The identified attribute independent variables were experience and setting. Experience refers to the internship experience (fall semester or spring semester). The second variable, setting, refers to the type of school in which a pre-service teacher experiences the student teaching internship (urban or non-urban) or the instructional setting in which focus group discussions were facilitated. The dependent variable is the pre-service teachers' perceptions of their own disposition. The FA score, calculated by the participants' cooperating teachers and university supervisors, also measured an outside perspective on dispositions of pre-service teachers. Paired t-test and one-way ANOVA procedures were used to analyze the quantitative research questions.

For the qualitative analysis, the INTASC Principles and Disposition Indicators were used because of the existing definition of dispositions in addition to the well-

constructed list of desired dispositions for pre-service teachers. Dispositions were coded according to the INTASC Principles (see Appendix A).

Multiple means for measuring teacher disposition were obtained to ensure confidence in the results of this study. William S. Lang asserts (2005) :

...guesses, cheating, and simply knowing (but not willingness to do) are all threats to the confidence that the [reporter] possesses the knowledge and skills referenced. In the areas of affective assessment there is always the possibility that someone would self-report what was 'expected,' but not what they really believed or behaved.

He goes on to explain that there are many ways to ensure valid results in affective assessment. One way is to design items on which faking are difficult and detectable by requiring respondents to discuss values and beliefs. Questions should require specific details so that contrived answers can be identified, and observations of behavior are consistent with beliefs. He states, "Multiple measures with different item types are the best way to gain the confidence we seek" (Lang, 2005).

Because of the possible reliability and validity issues with this type of research, multiple measures were used for this inquiry. Pre-service teachers self-reported the survey, reflections and focus groups. Outside data from university supervisors and mentor teachers assisted in providing confidence in the results of this study.

Inductive within deductive coding was used to analyze the journal responses and focus groups. Template analysis (King, 2004) used pre-established codes based on the 10 INTASC Principles (Appendix A). Themes also emerged inductively and were identified throughout the coding process.

Participants

Candidates from the one-year master's plus teaching license program (Option #3) at Colorado State University during the 2009-2010 academic year were included in the study. Teacher licensure candidates participated in a practicum and seminar during the fall semester, and student teaching and another seminar during the spring semester during the data gathering process. Teacher candidates may or may not have had similar experiences between the two semesters, so the setting refers to the location the student teaching experience occurred (urban or non-urban), while instructional setting refers to the setting in which students participated in courses (urban high school, non-urban high school).

The entire available sample was used, which consisted of two cohorts with a total of 44 students; 16 males and 28 females. In addition, 16 pre-service teachers participated in the urban instructional setting, while 28 participated in the non-urban instructional setting. Of the students who responded, the sample also included 18 students who were considered to have an urban internship experience and 16 students who were considered to be in a non-urban (either suburban or rural) setting of their student teaching experience. Although the entire available sample was used, it is not considered to be the population because similar programs exist and the study could easily be replicated in other locations.

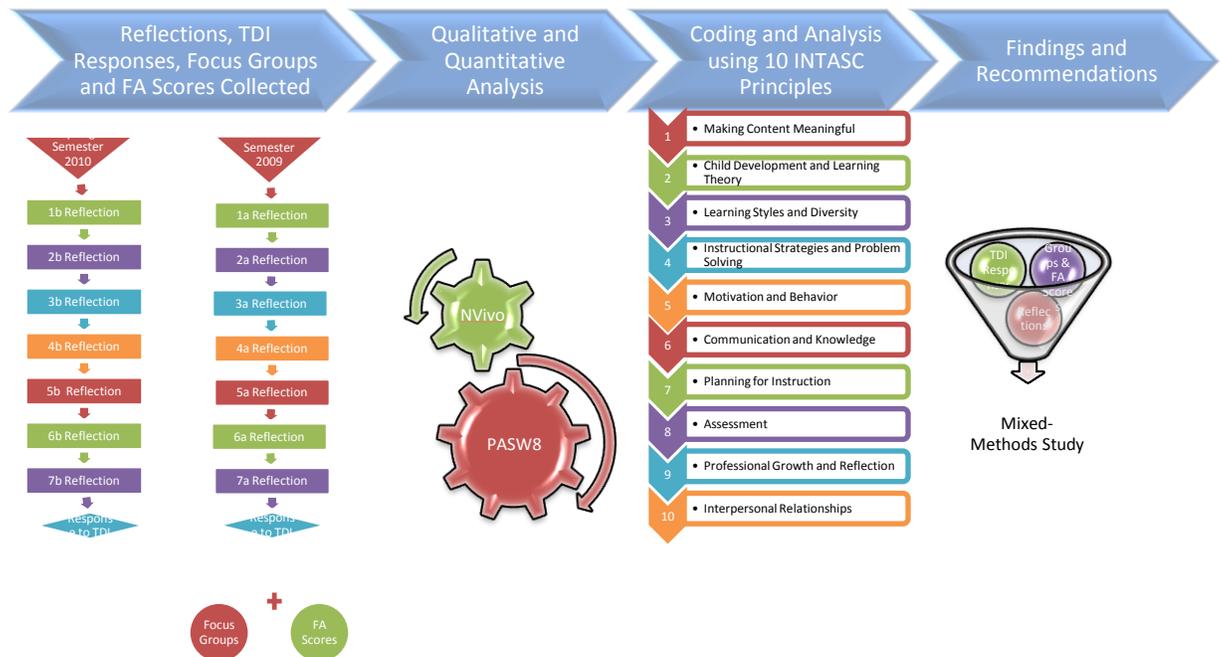
Data Collection

Participants used the online blackboard program at CSU called RamCT to complete and submit their reflections and surveys. This program is easily accessible from any computer with online capabilities. Each member of the cohort was asked to

complete seven open-ended questions designed for qualitative analysis (Appendix B). A Likert-type survey, the Teacher Disposition Index (TDI), was given to participants towards the end of each semester of practicum experience (Appendix C), also scaled and designed for quantitative analysis.

Figure 1 below shows the stages of data collection and analysis used for this study. Stage I represents students' responses to open-ended questions based on the ten INTASC Principles gathered over fall and spring semesters, in addition to responses from the TDI at the end. The open-ended questions and focus groups were designed to validate and explain data collected from the TDI. Demographic information such as content area and setting for internship was entered for each participant via the instrument. Participants submitted prompts bimonthly during the fall and spring semesters of the Option #3 program. Spring semester also included collection of focus group responses and Final Assessment scores. Stages II and III included the qualitative and quantitative analysis of data using NVivo and PASW8 using the 10 INTASC Principles and Dispositions Indicators. Stage IV included mixing the qualitative results with the quantitative findings to find patterns and relationships in order to answer the research questions and provide recommendations based on the findings.

Figure 1: Diagram of Methodology



Data from students' Final Assessment (FA) collected by CSU's School of Teacher Education and Principal Preparation (STEPP) was also used for validation. The FA score is a composite score rating the professionalism of the pre-service teacher during the internship experience. It is determined by both the cooperating teacher and the university supervisor and was collected at the end of the internship experience.

Another measure of validity was added at the end of the internship experience. Focus groups were conducted in groups of four students at a time according to instructional setting. Participants discussed specific questions about their experiences and the structure of the program. These groups were recorded, and then transcribed for coding.

All information was given and stored electronically. Each individual student granted access to the data in this study. Responses were monitored for completion and

included as a grade in the seminar, taken concurrently with participants' practicum experience. Data analysis began once the practicum student teaching was finished in the spring semester.

Validity and Reliability of the TDI

The Teacher Disposition Index (TDI) was used for this study. The instrument was analyzed for reliability and validity (Schulte, Edick, Edwards, & Mackiel, 2004). Schulte, et al. claim: "The item development phase and the content validity procedures ensured that the TDI measured the dispositions of effective teachers as specified in the INTASC (1991) Principles" (2004). Based on an exploratory factor analysis using a principal axis factoring method, the construct validity was evaluated. The researchers/developers of the TDI wanted to investigate common variance in order to determine the number of dimensions that the TDI measured. Investigators reported that the TDI measured two constructs: a "Student-Centered" dimension, and a "Professionalism, Curriculum-Centered" dimension (see Appendix A for factor analysis and definition of the two constructs). Reliability for the TDI subscales was measured using Chronbach's alpha (Schulte, et al., 2004).

Qualitative Validation

Qualitative analysis was validated from several sources from several individuals through the triangulation process which is advantageous "because it...can result in well-validated and substantiated findings" (Cresswell & Plano-Clark, 2007). Responses were coded with the 10 INTASC Principles and analyzed by using inductive within deductive coding. The Final Assessment (FA) from cooperating and supervising teachers and focus group transcriptions were also be used to validate qualitative responses.

Data Analysis

To study whether pre-service teachers' perceptions of dispositions are influenced by experience and setting and content, the following research questions were asked:

1. Does experience validate perception of dispositions?
 - a. Do perceptions of dispositions change as a candidate gains experience in the classroom?
 - b. What perceived dispositions are stronger/weaker at the beginning of the candidate's internship experience than at the end of the internship experience?
2. Does setting validate perception of dispositions?
 - a. Does the setting (urban vs. non-urban) influence the strength of the dispositions?
 - b. Does the setting influence the "professional rating" of a pre-service teacher?

Quantitative

The quantitative analysis utilized the PASW8 statistical analysis program and "SPSS for Introductory Statistics: Use and Interpretation" (Morgan, Leech, Gloeckner, & Caplovitz-Barrett, 2007). Descriptive numerical and graphical analyses were initially examined to determine the appropriate test and post-hoc comparisons. It was assumed that there were no violations of normality or homogeneity of variance, so the following statistics were used to answer the following questions from above:

- 1a. A paired t-test was used to measure the difference in student responses for individual questions on the TDI between fall and spring semester. In addition, questions were grouped by principle and compared using a paired t-test to compare change over time.
- 1b. Means were used to rank the 10 INTASC Principles for each semester.
- 2a. A one-way analysis of variance (ANOVA) was used to examine the strengths of perceived dispositions in urban versus non-urban settings.
- 2b. An independent samples t-test to determine if the setting (urban vs. suburban) influences the ‘professional rating’ of a pre-service teacher. Principles were also grouped into “Student-Centered” and “Professionalism, Curriculum-Centered” categories according to the questions within the TDI, and used a one-way ANOVA to compare the difference in settings.

Qualitative

The qualitative analysis employed NVivo computer assisted data analysis software. All responses were coded using the process of Template Analysis (King, 2004), where data was coded using the 10 INTASC Principles and Dispositions Indicators, then analyzed deductively within the two constructs, “Student-Centered” and “Professionalism, Curriculum-Centered.” Narratives were then analyzed deductively.

Mixed

The main research questions, addressing the validation of perceptions of dispositions with experience and setting, used a three stage structure: Stage I was the qualitative Template Analysis including inductive within deductive coding. Stage II was

the quantitative phase. Descriptive and inferential statistics were used to analyze quantitative data. In Stage III, qualitative and quantitative data were merged so that a complete picture was developed of how the two sets of data were related. Qualitative data were “quantized” so that data could be compared in a non-biased manner. The results of Stage III compared the “quantized” qualitative data with the quantitative data in discussion format.

CHAPTER FOUR: FINDINGS

This mixed methods study investigated whether perceived dispositions in pre-service teachers are influenced by experience and setting (urban versus non-urban). Longitudinal data from two semesters of internship experience in the classroom are presented in this chapter. The study participants were enrolled in Colorado State University's master's plus teacher licensure program (Option #3), completing internship experiences by observing in the classroom during the fall semester of 2009, then student-teaching during the spring semester of 2010. Students used RamCT to respond to open-ended prompts regarding their internship experiences and rated their perceived dispositions on a 10-point Likert type scale using the TDI survey containing questions based on the 10 INTASC Principles and Dispositions Indicators (1992). Qualitative data were examined using a non-experimental comparative approach. The responses to prompts were examined using the INTASC Principles as *a priori* codes with the structure of template analysis. Support from the narrative findings was also considered.

Restatement of the Problem

Teacher quality is a high priority given the need to close the achievement gap, especially in urban settings. Peske and Haycock gathered data about the distribution of teachers in Cleveland, Chicago and Milwaukee and found large differences between the number of qualified teachers in the highest poverty and highest minority schools, and those schools with few minority or low-income students (2006, p. 1). The reality is that change in the school system in the United States will never transpire if teacher education programs cannot adequately prepare teachers (Talbert-Johnson, 2006). Accreditation

agencies have taken the research on teacher quality seriously and set forth mandates to ensure teacher quality.

Talbert-Johnson also insists that quality teachers possess “appropriate dispositions to address diversity issues at all levels of the educational landscape” (2006, p. 149).

Other researchers have shown there is a relationship between quality teachers and their link to dispositions: “Students learn more from teachers with certain characteristics” (Wayne & Younges, 2003; as cited in Thompson, Ransdell, & Rousseau, 2005).

In addition, the internship experience in which pre-service teachers participate is an important aspect in improving the preparation of quality teachers. Past studies have shown that the quality of teachers increases when candidates are given more time in internship experiences. Singh says, “Field experiences ... allow teacher candidates to apply and reflect on their content, professional and pedagogical knowledge, skills, (and) dispositions, in a variety of settings” (2006, p. 3).

The setting in which a pre-service teacher takes part can also make a difference in the preparedness when it comes to working with diverse populations of students. When pre-service teachers are provided experiences in realistic settings, beginning teachers are more competent in some aspects of planning, instruction, management, and assessment. They are also more integrated, as well as student-centered, during the processes of planning, instruction, assessment, management and reflection (p. 7, Castle, Fox, & Souder 2006; as cited in Singh, 2006).

What was not known about teacher dispositions, internship experience and setting, is whether the length of internship experience or setting in which pre-service

teachers participate affects perceived dispositions. With the complexity of teacher preparation and the current focus on dispositions, narrowing the focus to setting and experience is useful in developing recommendations for teacher preparation, and was the focus of this inquiry.

Research Questions

To study whether pre-service teachers' perceptions of dispositions are influenced by experience and setting, the following research questions were asked:

1. Does experience validate perception of dispositions?
 - a. Do perceptions of dispositions change as a candidate gains experience in the classroom?
 - b. What perceived dispositions are stronger/weaker at the beginning of the candidate's internship experience than at the end of the internship experience?
2. Does setting validate perception of dispositions?
 - a. Does the setting (urban vs. non-urban) influence the strength of the dispositions?
 - b. Does the setting influence the "professional rating" of a pre-service teacher?

Organization and Order of Presentation of Results

This chapter is organized by research question. Sub questions 1a, 1b, 2a, and 2b are presented first and were evaluated using quantitative analysis (non-experimental approach) and qualitative analysis (inductive within deductive coding) separately.

Finally, overarching main research questions 1 and 2 were evaluated using the mixed methods approach. Because RamCT does not have editing features, qualitative entries included in the following sections may contain grammatical errors and misspellings.

Research Question 1a.

Do perceptions of dispositions change as a candidate gains experience in the classroom?

The perceived dispositions scores between pre-test and post-test on the TDI were examined using a paired samples t-test. Because of the small number of respondents taking the TDI both fall and spring semesters (n=7), normality was tested using differences between scores. Not all pairs were found to be normally distributed, so a Mann-Whitney test was performed. None of the remaining specific responses were significant using Mann-Whitney. Nine questions from the survey were statistically significant when a t-test was performed. Major significance is also suggested by the larger than typical effect sizes (Cohen, 1988). Table 1 below lists the questions in the survey reporting significant decrease in perceptions of dispositions:

Table 1: *Significant Decreases in Perceived Dispositions, Pre-Test to Post-Test (TDI)*

Question from TDI Survey	INTASC Principle Represented	Significance	<i>d</i>	Mean Difference
2. I understand that students learn in many different ways.	3	0.045	1.185	0.86
3. I demonstrate qualities of humor, empathy, and warmth with others.	5	0.004	1.247	1.00
6. I believe that all students can learn.	2	0.004	1.692	2.57
23. I am open to adjusting and revising my plans to meet student needs.	7	0.047	1.062	0.71
25. I believe it is important to learn about students and their community.	7	0.002	2.140	3.00
31. I uphold the laws and ethical codes governing the teaching profession.	9	0.008	1.663	1.43

Table 2 below lists the specific questions from the survey showing increased perceptions of dispositions:

Table 2: *Significant Increases in Perceived Dispositions, Pre-Test to Post-Test (TDI)*

Question from TDI Survey	INTASC Principle Represented	Significance	<i>d</i>	Mean Difference
21. I am willing to receive feedback and assessment of my teaching.	9	0.011	2.138	1.71
29. I cooperate with colleagues in planning instruction.	7	0.047	1.446	1.43
45. I take initiative to promote ethical and responsible professional practice.	9	<.001	8.596	7.14

Each INTASC principle was also examined using an independent samples t-test. The data were checked for normality by using the difference between post-test and pre-test. All assumptions were met with the exception of Principle 3. The Mann-Whitney test was used to correct for a small sample size (n=7) and non-normality and was not found to be significant. Out of the 10 INTASC Principles, seven were found to show significant differences from post-test to pre-test. In addition, all but Principle 4 were found to have larger than typical effect sizes. Principle 4 does show a medium to large effect size. Table 3 below reports significant principles:

Table 3: Significant Differences in INTASC Principles, Post-Test to Pre-Test (TDI)

INTASC Principle	Significance	<i>d</i>	Mean Difference	Increase or Decrease
Principle 1: <i>Making Content Meaningful</i>	0.006	-3.63	-1.57	Decrease
Principle 4: <i>Instructional Strategies and Problem Solving</i>	0.007	0.75	0.81	Increase
Principle 5: <i>Motivation and Behavior</i>	0.002	-1.32	-0.75	Decrease
Principle 7: <i>Planning for Instruction</i>	0.004	-1.66	-0.82	Decrease
Principle 8: <i>Assessment</i>	0.003	2.81	2.57	Increase
Principle 9: <i>Professional Growth and Reflection</i>	0.001	-2.16	-0.98	Decrease
Principle 10: <i>Interpersonal Relationships</i>	0.033	-1.73	-1.33	Decrease

Eleven focus group discussions were conducted; four were instructed in an urban setting, while seven were instructed in a non-urban setting. Participants responded to the question: *In what area do you believe you grew the most?*

The table below lists the top three principles mentioned, along with frequencies:

Table 4: Principles by Frequency Identified as Areas of Growth by Focus Groups

Principle	Frequency
Principle 4: <i>Instructional Strategies/Problem Solving</i>	11
Principle 5: <i>Motivation and Behavior</i>	8
Principle 9: <i>Professional Growth and Reflection</i>	8

INTASC Principle 4: *Instructional Strategies and Problem Solving* was the most frequent principle discussed in focus groups. Many participants highlighted instructional strategies such as differentiation, organization and writing effective lessons, as reflected in participant responses below:

“I don’t mind listening to someone teach. I’ve discovered that not all people are like that. I think that’s what I learned the most. Just about student centered learning and making sure that students have that power in their education. That they learn better that way.”

“One thing I found that I grew most was to bring in as many different learning styles as possible in one lesson. It doesn’t have to be more than 5 minutes. If you can bring in a reading, some direct instruction, show a video clip, there are so many different learning styles. It helps keep kids engaged.”

“I learned how to differentiate in a way I didn’t think was possible. It will serve me really well.”

“...The biggest accomplishment and growth area was learning how to teach and change it up every ten minutes. I am perfectly happy sitting in the back listening to someone give me information and I learned that not everyone is like that.”

“You can’t treat students like they already know material, so I learned that I had to teach in steps and really read how my students were doing.”

“Learning how integrated everything is...classroom management, differentiation, instructional strategies. It all makes up the classroom. You need all of it to be successful.”

“Being able to create measurable objectives. To have the sections of the lesson plan helped me to understand how to achieve my objectives.”

“I really came to understand and appreciate that lesson planning strategy. And to justify the things I did with my students.”

Another area of growth mentioned was Principle 5: *Motivation and Behavior*.

Participants' responses touched on issues of expectations of students and classroom management:

"They were more raw than I expected them to be. I didn't expect to hear them cussing and absolutely refuse to do anything."

"I never thought I'd have to teach children the skills of school. What it means to be responsible for bringing your pencil and having your materials. At the same time, understanding that some kids don't have their pencil and materials for a reason. It's an eloquent balance that needs to happen every day, every minute."

"I have become more forceful though when it came time to buckle down and get something done."

"There was a lot of growth in how to run a class. You've never done it before and you learn from your mistakes very quickly."

"...It became more natural to address problems. I'm more direct with them now. You have to be."

The final area of growth mentioned in the top three Principles was Principle 9:

Professional Growth and Reflection. Comments made by participants emphasized topics such as increased confidence, learning from experience, collaboration with others, and the importance of a teacher's responsibility.

"...My confidence grew the most. That's because we were in the classroom from day one. If I was just to go into student teaching without ever having been in a classroom, I wouldn't have grown as much."

"My confidence has grown 20-fold since I started."

"Confidence in general. Wow what am I doing? I felt like our cohort was so supportive, I felt like I had a team behind me – it gave me a lot of strength."

"I could not speak in front of a group – I was terrified. I have come so far and actually felt comfortable student teaching. I'm way more confident than I was before."

“...My growth was in risk-taking. I was one to just sit back and figure things out. You didn’t have time to do that in this program. I really had to do things on the fly and just get in there and do it.”

“...We were thrown more stones. You learn to deal with things on the spot. Through experience, standing in front of kids and having to learn from what you did was great.”

“To switch from painting in my room to communicating and the different set of people skills I’ve learned has been the biggest change.”

“My growth was personally and professionally. Collaboration and organization. You learn that real quick.”

“I learned to be empathetic and I learned compassion. I’m more of a people person now than ever before.”

“My values, beliefs they grew.”

“The mission of a teacher is so great. It’s truly an art to weave all missions together in one classroom with 30 students.”

Research Question 1b

What perceived dispositions are stronger/weaker at the beginning of the candidate’s internship experience than at the end of the internship experience?

The questions from the TDI were categorized by INTASC principle. Means were calculated for each Principle and the dispositions were listed in order from strongest to weakest. See table 5 below for results:

Table 5: Ranking of INTASC Principles for Each Semester by Mean Response

Rank	Fall Semester	Mean	Spring Semester	Mean
1	Principle 9: <i>Professional Growth/Reflection</i>	9.14	Principle 3: <i>Learning Styles and Diversity</i>	9.11
2	Principle 2: <i>Child Development and Learning Theory</i>	9.04	Principle 2: <i>Child Development and Learning Theory</i>	8.81
3	Principle 5: <i>Motivation and Behavior</i>	8.85	Principle 6: <i>Communication and Knowledge</i>	8.78
4	Principle 7: <i>Planning for Instruction</i>	8.85	Principle 5: <i>Motivation and Behavior</i>	8.63
5	Principle 3: <i>Learning Styles/Diversity</i>	8.80	Principle 9: <i>Professional Growth and Reflection</i>	8.38
6	Principle 1: <i>Making Content Meaningful</i>	8.72	Principle 7: <i>Planning for Instruction</i>	8.27
7	Principle 6: <i>Communication/Knowledge</i>	8.24	Principle 4: <i>Instructional Strategies and Problem Solving</i>	8.09
8	Principle 10: <i>Interpersonal Relationships</i>	7.53	Principle 8: <i>Assessment</i>	7.96
9	Principle 4: <i>Instructional Strategies/Problem Solving</i>	6.85	Principle 1: <i>Making Content Meaningful</i>	7.32
10	Principle 8: <i>Assessment</i>	5.70	Principle 10: <i>Interpersonal Relationships</i>	6.87

The qualitative analysis included 39 participants. Reflection responses were coded inductively within each INTASC Principle. The following table lists the 10 Principles for each semester, ranked in order of frequency of participants responding (out of 39).

Table 6: Reflection Responses Ranked by INTASC Principle According to Frequency for Each Semester

Fall Semester		Spring Semester	
Principle	Frequency	Principle	Frequency
4: <i>Instructional Strategies and Problem Solving</i>	30	5: <i>Motivation and Behavior</i>	34
5: <i>Motivation and Behavior</i>	28	3: <i>Learning Styles and Diversity</i>	33
10: <i>Interpersonal Relationships</i>	28	4: <i>Instructional Strategies and Problem Solving</i>	33
1: <i>Making Content Meaningful</i>	20	1: <i>Making Content Meaningful</i>	32
7: <i>Planning for Instruction</i>	19	10: <i>Interpersonal Relationships</i>	30
2: <i>Child Development and Learning Theory</i>	16	2: <i>Child Development and Learning Theory</i>	24
3: <i>Learning Styles/Diversity</i>	16	7: <i>Planning for Instruction</i>	19
8: <i>Assessment</i>	9	9: <i>Professional Growth and Reflection</i>	12
6: <i>Communication and Knowledge</i>	4	8: <i>Assessment</i>	7
9: <i>Professional Growth and Reflection</i>	2	6: <i>Communication and Knowledge</i>	2

Notable positive changes occurred in INTASC Principles 5 and 3 during students' internship experiences. Negative changes were noted in Principles 4, 10 and 7.

INTASC Principle 5: *Motivation and Behavior* was the most mentioned during the spring semester. Pre-service teachers commented on the importance of a positive classroom environment, managing difficult students, cooperative learning, and motivating students in their classrooms:

“If I am going to foster an atmosphere primed for learning, students and myself cannot be disrespectful. This is a multi-directional, multi-lane highway. I must ensure that my actions and statements are respectful of my students. I must also ensure that students are respectful of one another. If students feel disrespected they will not feel open to being fully involved or engaged in class, which in turn means less learning will take place.”

“If a student does not feel safe within the classroom, then that student will be prevented from learning. Also, threatening or intolerant speech is often a prelude to physical and emotional violence. Studies have shown that students who engage in these types of unacceptable speech often escalate into more overt and direct types of negative behavior. Nipping unacceptable speech in the bud early can help prevent a long-term pattern of negative behavior.”

“We vented frustration at the lack of parental involvement and lamented about the issues specific students had to deal with outside of school. We agreed that building a support network for the students in the school environment and helping students gain control in school was key to helping them turn things around.”

“I had a conversation with this student individually with how he should select a topic that he really cares about or enjoys. He was still apathetic until I started pointing out activities and topics that I have heard him mention throughout the semester. This tactic finally worked and on the last speech this student used inflection, was prepared, smiled and spoke with enthusiasm!!!!!!”

“By establishing a relationship and getting to know him I have opened him up and made him more receptive to my teaching, I will continue to establish more trust and work to make the content more relevant to him by making connections to things he is interested in.”

“He improves when there is one-to-one interaction and accommodations/differentiations in the assignments, making them more within the realm of his capacities/abilities, but continuing to expect him to strive.”

“Having the students in groups allows for many peer to peer teaching moments and provides opportunities for students who normally struggle with writing a chance to be successful.”

“I have found that, when working in the computer lab and in groups, that they tend to do well and elicit responses and identify key concepts, that I don't think would have happened in a direct instructional setting. They enjoy working together and also being up and out of their seats and constructing meaning!”

“I believe that when you show kids you care about their life...they are more anxious to learn. Show them how it matters to them.”

“By utilizing real stories that touched at their emotions I was able to have students engaged and participating. By allowing students to share personal stories, other students were made to understand that their peers deal with this subject matter in their personal lives.”

The second Principle to increase in ranking is Principle 3: *Learning Styles and Diversity*. Participants included observations about diverse learners, and discussions about instructional strategies that differentiate and reach various learning styles:

“Being in a poor community opens your eyes to a wide-range of different personalities.”

“I guess it is the unique students I will never forget. I always try to remember that life would be boring without individuals such as these.”

“I realized that everyone gets where they are for a reason...there is a story. Find the story and you can understand them better, thus learning can occur.”

“...We are constantly questioning what interventions/accommodations would best suit our most troubled students.”

“I talk with him in front of the students and he responds whole-heartedly when we speak of music and sometimes art. I get him to pay attention in little ways like that.”

“I also am trying to incorporate more conceptual math activities in class to go along with the usual problem sets. Putting a somewhat artistic spin on math does grab some students who otherwise do not turn in the usual assignments.”

“...Have students collaborate while reviewing because students have different strengths,”

“These journals allow student to think critically about the concept of drama and also to connect drama to their real lives. This makes the unit more authentic and relevant to the students and helps them interact personally with the assigned readings.”

“Also, I give him longer projects to work on, where he can build or design something (on paper). He can spend a week on it and pace himself this prevents him from feeling like he is doing ‘extra’ work.”

INTASC Principles 4, 10 and 7 showed a decrease in responses from fall semester to spring semester. Of those three, pre-service teachers had many negative responses relating to Principle 4: *Instructional Strategies*. Participants commented about critical thinking in the classroom and making content relevant to learners:

“I will ask questions of the lab for the groups to discuss. Some will try and discuss, but others will either ask me and refuse to think on their own (even if I ask leading questions for them to think about). Some will even refuse to write down their ideas and would rather forfeit the question than try.”

“As teachers at this institution we are also encouraged to hold students hands on many tasks and this will and does inhibit their critical thinking skills.”

“...For the most part that the students here are not thinking outside the box or beyond what is asked, or go beyond when asked.”

“Sometimes when working with kids on their math problems, I will ask them how a particular problem might relate to their everyday life. This usually doesn't go over so well, even though they are exposed to real-world math problems every day. They usually just stare at me blankly and say ‘I don't know’ or ‘Math is boring’ etc.”

“It's definitely a challenge finding that relevancy for everyday lessons.”

Research Question 2a

Does the setting (urban vs. non-urban) influence the strength of the dispositions?

The two settings (urban and non-urban) were compared to the 10 INTASC Principles using a one-way analysis of variance (ANOVA). The assumption of homogeneity of variance was violated in Principles 1, 4, and 10; therefore, the Welch F-Ratio was reported. There were no significant differences for any principle between settings.

Qualitative data between the two groups, urban and non-urban, include 18 participants who did their student teaching in an urban setting, and 16 in a non-urban

setting. In addition, seven focus groups were instructed in a non-urban setting and four in an urban setting. Because these numbers are not equal, qualitative data for this section will be reported in percentages (number of responses per total responses in that setting).

When setting was compared to INTASC Principle, only Principles 2 and 3 showed major differences. All other principles had similar percentages coming from each setting. Principle 2: *Child development and Learning Theory* included 9.4% of respondents from an urban setting and 6.6% from a non-urban setting. Principle 3: *Learning Styles and Diversity* included 11.9% of respondents from an urban setting and 8.7% from a non-urban setting. Because differences were not significant, narratives were not further examined for themes.

Negative responses were compared within the settings and it was found that 70% of negative responses came from participants interning in an urban setting. Participants in urban student – teaching settings who commented negatively highlighted student motivation and behavior as a concern:

“I never thought that I would bend over backwards for a student the way I seem to with him, but it's worth avoiding a fight and an angry student (and teacher)! I know that he doesn't care about school or passing, so I just try to be a positive adult figure in his life, just in case he ever decides to shape up and get serious about his academic career.”

“At first when I tried to talk to him, he didn't want to engage in conversation. So I tried different things such as moving his seat, timing him out when he disturbed class, and giving him modified assignments because I thought he didn't understand the material. None of that seemed to work...”

Non-urban participants commented on critical thinking skills in students as a concern:

” As teachers at this institution we are also encouraged to hold students hands on many tasks and this will and does inhibit their critical thinking skills.”

“...When I ask students to fill a graduated cylinder to a certain amount and they ask me 4 times how to do this I am not overly optimistic of their critical thinking abilities”

Focus groups were compared between the two settings. The table below lists the top three INTASC principles coded for each instructional setting.

Table 7: Top Three INTASC Principles Coded for Each Instructional Setting

Adams City High School (Urban Setting)		Fossil Ridge High School (Non-Urban Setting)	
Principle	Percentage	Principle	Percentage
5: <i>Motivation and Behavior</i>	26.9	4: <i>Instructional Strategies and Problem Solving</i>	18.4
10: <i>Interpersonal Relationships</i>	18.9	10: <i>Interpersonal Relationships</i>	18.2
2: <i>Child Development and Learning Theory</i>	15.1	3: <i>Learning Styles and Diversity</i>	12.6

Research Question 2b

Does the Setting Influence the “Professional Rating” of a Pre-Service Teacher?

Final Assessment (FA) data was a culminating grade given to participants at the end of their student teaching experiences. This grade was given by the university supervisor and cooperating teacher and represents the “Professional Rating” of a teacher candidate. An independent samples t-test was conducted to assess whether the setting

influenced “Professional Rating.” No assumptions of normality were violated. No significant difference was found between the two settings related to the FA score.

Further investigation was conducted by combining individual responses from the TDI to form the subscales “Student-Centered” and “Professionalism, Curriculum-Centered.” The subscales were compared with settings using a one-way ANOVA. The assumption of homogeneity of variance was violated in the “Professionalism, Curriculum-Centered” subscale, so a Welch F-Ratio was reported. There were no significant differences for either one of the subscales when compared to setting.

Mixed Results

Main Research Question 1

Does experience validate perception of dispositions?

Seven of the ten INTASC Principles showed a significant change over time. Narratives provided by the participants supported these findings, especially for Principles 4, 7, and 9. Though Principle 3 showed no significant difference in the quantitative analysis, significance is supported by the narratives provided and qualitative rankings.

Principle 4: *Instructional Strategies and Problem Solving*, showed a significant increase when analyzed from fall to spring. In addition, it was ranked first in the focus group responses and third in the overall coding from participant responses, increasing by five ranks from spring to fall. However, 70% of the negative responses provided by participants were linked to this principle.

Another INTASC Principle that increased in significance is Principle 9: *Professional Growth and Reflection*. Not only did two of the significant questions represent that principle, it was also supported by narratives provided by participants, ranking in the top three most cited principles by focus groups and increasing by two ranks when compared from fall to spring semester.

The principle showing significant decrease in both quantitative and qualitative analysis was Principle 7: *Planning for Instruction*. It was among the statistically significant standards and is represented by two significantly decreasing questions from the TDI. In addition, Principle 7 decreased by two in ranking in both the quantitative and qualitative analysis. It was also a Principle that included negative responses.

Although not statistically significant, Principle 3, *Learning Styles and Diversity*, should be mentioned as practically significant, as supported by ranking in both quantitative and qualitative analysis. It ranked number one overall in the spring semester when means were compared, increasing in rank by four. In addition, it increased in rank by 5 in the qualitative responses, ranking number two overall for spring semester.

Main Research Question 2

Does setting validate perception of dispositions?

Quantitative analysis revealed no statistical significance in perceived dispositions by setting (urban or non-urban) or differences in Final Assessment scores by setting. However, narrative results indicate practical differences in dispositions between the two settings. When the groups were compared by percentage of responses coded within each standard, differences were noted in Principle 2: *Child Development and Learning Theory*,

and Principle 3: *Learning Styles and Diversity*, with the urban group having a higher percentage of responses in both cases. Principles 5: *Motivation and Behavior* and 2: *Child Development and Learning Theory* were also in the top three ranked for the urban focus groups. The non-urban focus groups included Principles 3: *Learning Styles and Diversity* and 4: *Instructional Strategies and Problem Solving* as the top three principles cited.

Another significant theme that emerged through qualitative analysis was a similarity in dispositions between urban and non-urban settings. Both groups ranked Principle 10 (*Interpersonal Relationships*) as second in focus group discussion responses.

Adding narrative responses allows for a detailed understanding of the research. “Professional Rating” could not be analyzed qualitatively in an effective way because of the nature of the questioning. However, if the qualitative differences between the two settings were categorized according to the TDI subscales, a difference can be seen between the “Student-Centered” dispositions and the “Professional, Curriculum-Centered” dispositions. Specifically, the ranked principles for the urban focus groups included *Motivation and Behavior* and *Child Development and Learning Theory*, which are both included in the “Student-Centered” subscale. The “Professional, Curriculum Centered” subscale included *Learning Styles and Diversity* and *Instructional Strategies and Problem Solving*, which were in the top three ranked principles in the non-urban focus groups.

Conclusion

Analysis of both responses from the TDI and narratives was conducted to provide further understanding of perceived dispositions of pre-service teachers. Dispositions were examined using 10 INTASC Principles for dispositions over time (fall to spring) as well as differences between internship and instructional settings (urban and non-urban) in which students completed their student teaching experience. Responses to the TDI survey were used to explore differences in perceived dispositions between time and setting. Answers to open-ended reflections were also used to explore pre-service teachers' perceptions of dispositions related to the INTASC Principles. Responses from focus group discussions were used to measure changes over time and differences between settings. Final Assessment data was included to provide insight to the "Professional Rating" of participants.

Statistically significant differences were found for seven of the 45 questions included in the TDI, measured over time. In addition, seven of the ten INTASC Principles showed significant differences in change over time, specifically, Principles 4, 7, and 9 which were supported by narrative provided by participants in focus groups.

When compared in an independent samples t-test, no statistical significance existed between perceived dispositions in the urban setting versus the non-urban setting. However, when narratives were examined, some differences emerged between urban and non-urban settings. Urban settings tended to emphasize "Student-Centered" dispositions while non-urban students highlighted "Professional, Curriculum-Centered" dispositions. There was not a significant difference between the two groups for FA scores, nor was

there a difference between the two settings when dispositions were categorized into “Student-Centered” and “Professionalism, Curriculum-Centered” subscales.

All INTASC Principles were addressed through the journal prompts given to students. Focus groups had very general questions about their growth over time, all 10 Principles were addressed in the discussions. Important considerations and implications will be presented in the following chapter.

CHAPTER FIVE: DISCUSSION OF FINDINGS

Introduction

A summary of the study, overview of the problem and methodology, major findings for each research question, findings related to the literature, implications and recommendations for further research will be presented in this chapter. A section about the advantages of conducting a mixed-methods design for this research is also included. Important considerations drawn from the data presented in Chapter 4 will be addressed throughout the chapter.

Overview of the Problem

Teacher quality is a high priority given the need to close the achievement gap, especially in urban settings. Accreditation agencies have taken the research on teacher quality seriously and set forth mandates to ensure teacher quality. It has been shown that there is a relationship between quality teachers and their link to dispositions. In addition, the internship experience in which pre-service teachers participate is an important aspect in improving the preparation of quality teachers. The setting in which a pre-service teacher takes part can also make a difference in the preparedness when it comes to working with diverse populations of students. Beginning teachers are more competent in some aspects of planning, instruction, management, and assessment when given experiences in realistic school settings.

The connection between the development of dispositions in pre-service teachers, the setting in which they do their internship experience, and the length of internship experience has no empirical basis at the time of this study. Narrowing the focus of this

study to setting and experience as related to the development of dispositions in pre-service teachers will be useful in developing recommendations for teacher preparation,

To study whether pre-service teachers' perceptions of dispositions are influenced by experience and setting, the following research questions were asked:

1. Does experience validate perception of dispositions?
 - a. Do perceptions of dispositions change as a candidate gains experience in the classroom?
 - b. What perceived dispositions are stronger/weaker at the beginning of the candidate's internship experience than at the end of the internship experience?
2. Does setting validate perception of dispositions?
 - a. Does the setting (urban vs. non-urban) influence the strength of the dispositions?
 - b. Does the setting influence the "professional rating" of a pre-service teacher?

Review of Methodology

The mixed methods triangulation design (QUANT + QUAL) required the gathering of qualitative and quantitative data at the same time (Cresswell & Plano-Clark, 2007). Participants in this study logged onto an online blackboard system to respond to open-ended journal responses and to answer questions on the TDI survey, which was a 10-point Likert-type scale on their perceived dispositions based on the 10 INTASC Principles.

The quantitative analysis for this research used a non-experimental comparative approach. The identified attribute independent variables were experience and setting. Experience refers to the internship experience (fall semester or spring semester). The second variable, setting, refers to the type of school in which a pre-service teacher experiences the student teaching internship (urban or non-urban). The dependent variable is the pre-service teachers' perceptions of their own dispositions. The FA score also measured an outside perspective on dispositions of pre-service teachers. Paired and independent samples t-test and one-way ANOVA procedures were used to analyze the quantitative research questions.

For the qualitative analysis, the INTASC Principles and Disposition Indicators were used because of the existing definition of dispositions in addition to the well-constructed list of desired dispositions for pre-service teachers.

Because of the possible reliability and validity issues with this type of research, multiple measures were used for this inquiry. Students self-reported the survey, reflections and focus groups. Outside data, Final Assessment scores, obtained from supervisors and mentor teachers assisted in providing confidence in the results of this study.

While not all principles were specifically addressed in the prompts given to participants for reflection, several principles could be grouped into more than one category, so multiple prompts were not given for linked principles. For example, Principle 7: *Planning for Instruction* could be linked to Principle 4: *Instructional Strategies and Problem-Solving*. Both definitions include planning instruction based on

knowledge of subject matter, students' development, community, and curriculum.

Another example of linked principles is Principle 2: *Child Development and Learning Theory* and Principle 3: *Learning Styles and Diversity*. Differences in learning, development, and experience are included in these principles. While specific questions were not asked of each linked Principle, responses were coded according to which Principle responses corresponded to most closely.

Focus groups were conducted at the end of the student teaching semester. Groups of four were placed together according to their instructional (not student-teaching) setting. They included the Fossil Ridge (non-urban) group and the Adams City (urban) group. The focus group discussion began with a very open-ended question: *In what area do you believe you grew the most?* Participants were not given a list of principles; however, each INTASC Principle was addressed in some way throughout the focus group discussions. The frequency in which Principles were mentioned varied and differences were found between the groups instructed in an urban setting versus the group instructed in the non-urban setting. Because the question asked of the focus groups was presented positively, most responses were positive. However, an emergent theme was the presence of negative comments embedded within participant responses.

Major Findings: Question 1 Related to Experience

1a. Do perceptions of dispositions change as a candidate gains experience in the classroom?

1b. What perceived dispositions are stronger/weaker at the beginning of the candidate's internship experience than at the end of the internship experience?

Quantitative analysis revealed changes in perceived dispositions in nine out of 45 questions from the TDI. Decreases were found in six of the nine questions, while three had increases in perceptions over time. Effect sizes for these decreases ranged from 1.062 to 8.596, showing larger than typical effects. This indicates major differences in these questions from fall to spring semesters. In addition, seven out of ten INTASC Principles showed significant change in perceptions over time. Five of those seven decreased, while two increased. Effect sizes for the Principles ranged from 0.75 to 3.63, indicating larger than typical effect, which also revealed major differences in these Principles from fall to spring semester. The responses from participants via RamCT revealed why changes may have been negative or positive throughout the internship experience.

It is not a surprise that dispositions would change as a student gains experience in the classroom. However, it was a revelation to see that change in some statistically significant principles was in the negative direction. When analyzed, the principles that decreased over time included 1: *Making Content Meaningful*, 5: *Motivation and Behavior*, 7: *Planning for Instruction*, 9: *Professional Growth and Reflection*, and 10: *Interpersonal Relationships*. The following is a synopsis of narratives for each decreasing Principle given by teacher candidates within reflections and focus groups:

Principle 1, *Making Content Meaningful*.

Principle 1 was not in the top three mentioned in discussions or reflections. However, it was a consistently mentioned standard for both urban and non-urban interns. Participants often mentioned their love for and knowledge of their content area. Some even mentioned the relevancy of that area to students as a tool for teaching, even though students did not find the content itself interesting. The idea that their students will not be

as excited about the content as they are themselves may be a contributing factor to the decrease in this Principle in the quantitative analysis.

Principle 5, Motivation and Behavior.

Principle 5 ranked in the top three mentioned principles by focus groups and was ranked first in the number of individual responses. Participants from both settings mentioned areas such as expectations for students and classroom management as areas of growth within this principle. This Principle was in the top ranked for urban pre-service teachers, who cited positive learning environments, democratic classrooms, and motivation techniques as areas of improvement. The number of negative responses for this principle was higher for the urban group than the non-urban. Urban participants cited apathetic students as a concern in this area.

The reality of the challenges that students face on a daily basis surfaces for teacher candidates as they gain experience. Finding new ways to motivate students to participate in class, advocate for themselves, and behave in a way that contributes to a positive learning environment becomes a daily challenge. Teacher candidates cited frustration with issues that are out of their control as reasons for students' misbehavior.

Principle 7, Planning for Instruction.

Principle 7 showed a decrease in ranking by two from fall to spring semester, finally ranking in the seventh position. No differences were noticed, either by setting or by instructional group. However, narratives indicate a difference in emphasis between the urban instructional group and the non-urban group. Interns instructed in the urban group emphasized the value of collaborating while planning for instruction, whereas the

non-urban group stressed the importance of writing objectives based on standards and being flexible in their planning.

With a decline in responses between fall and spring semesters, it is important to note the emphasis put into planning while teacher candidates are in the introductory phase of the Option #3 program. It may be a case that, once candidates began planning instruction, it took a lesser role in their reflections than other dispositions such as student behavior or building relationships.

Principle 9, *Professional Growth and Reflection*.

Principle 9 was in the top three mentioned by focus groups and increased by two ranks from fall to spring semester in overall responses, moving up from last to eighth rank. No major differences were noted between settings or instructional groups. Narratives did not show any differences; both groups reflected on improving instruction and classroom management strategies.

The decline in mention of this Principle may be due to the increase in demand put on teacher candidates during their second (student teaching) semester. Candidates find that they have less time and energy to reflect of their profession, and tend to focus on the knowledge and skill required to be effective in the classroom. Koeppen and Davison-Jenkins support this theory and contend that “this neglect can reduce the capacity to reflect on the role that our human qualities and commitments play in energizing our creativity and resiliency as we plan curriculum and instruction” (2007, p. 91).

Principle 10, *Interpersonal Relationships*.

Principle 10 was ranked fifth after the spring semester, decreasing two ranks. However, the most important observation to note about this Principle is that it was ranked second in overall responses for both the urban and non-urban groups, indicating the importance of relationships in teaching, as well as the amount of growth the pre-service teachers experienced throughout their internships. Participants cited the importance of building relationships with students to assist in managing a classroom as well as creating a safe learning environment for students by emphasizing respect for themselves and others.

The two INTASC Principles that showed significance in the positive direction were 4: *Instructional Strategies and Problem Solving*, and 8: *Assessment*. Both of these emphasize specific strategies that can be taught to a pre-service teacher, and then improved with practice. With larger than typical effect sizes, the emphasis on these Dispositional Indicators is apparent in the change from fall to spring semester. In addition to the statistically significant changes, qualitative analysis also revealed a major positive change in responses for Principle 3: *Learning Styles and Diversity*. The following is a synopsis of narratives for each increasing Principle given by teacher candidates within reflections and focus groups:

Principle 3, *Learning Styles and Diversity*.

Principle 3 showed the overall greatest increase from fall to spring, ranking as the second most coded principle for the spring semester. Although it was not ranked within the top three in focus group discussions, it increased overall from fall to spring in both individual responses as well as focus group discussions. This principle was one of the

top ranked in individual responses for the non-urban group. Participants from all groups discussed the importance of understanding individual students, their experiences, and their perspectives. The urban group also emphasized the importance of making content relevant to their students.

The internship experience provides pre-service teachers with the exposure to students of various backgrounds, ethnicities, and socio-economic statuses. This requires teacher candidates to increase their awareness of the varied needs of each student. In turn, pre-service teachers may spend much of their planning time considering how best to teach each student within their classrooms.

Principle 4, *Instructional Strategies and Problem Solving*.

Principle 4 was the top ranked principle in focus group discussions. Participants mentioned instructional strategies and differentiation as areas of growth. Though the ranking for this principle decreased from fall to spring, it was ranked third in mentioned principles in individual responses for the spring semester. This Principle also had the most negative responses. Pre-service teachers cited critical thinking skills as an area of concern. In addition, this principle was in the top two ranked for the non-urban interns. This group named instructional strategies such as chunking instruction, collaborative learning, and clear directions as areas of growth related to this principle.

The internship experience allows pre-service teachers to gain experience in planning and delivering instruction. It is not a surprise that candidates had an increased awareness about the *Instructional Strategies and Problem Solving* disposition.

Principle 8, *Assessment*.

Principle 8 showed statistical positive differences from fall to spring, but decreased in qualitative ranking from fall to spring semester, finishing ninth in overall responses. Neither the setting or instruction group showed major differences, except through narrative responses. Urban respondents relating to this principle discussed inquiry, formative assessment, and authentic assessment as strategies that worked with their students. Non-urban respondents related this principle to goal-setting and results driven instruction.

The internship experience also allows pre-service teachers to gain experience in assessing students effectively. It is not surprising that candidates had an increased awareness about the *Assessment* disposition.

Discussion about Decline in Perceived Dispositions.

The decline in dispositions may be due to the pre-service teachers being idealistic at the beginning of their internship experiences, and then experiencing the reality when they take over a classroom in the second half of their internship experience. Cruickshank (1981) found that problems experienced by teachers fell into five categories: 1.) affiliation, 2.) control, 3.) parent relationships and home conditions, 4.) student success, and 5.) time. Each of these categories can be related to the decline in the INTASC Principles experiences in this research.

First, teachers want to establish positive relationships with their students and colleagues. The support a teacher receives and connection to one's colleagues is related to her success. In addition, teachers dream of having positive relationships with their

students – only to find out that they may not have great relationships with every one of them. Lack of support and difficulty building relationships with some students may be a cause for decline in the *Interpersonal Relationships* disposition.

Secondly, teachers want to have control over their environment. Misbehavior by students can be viewed as a lack of control and may contribute to a decline in the *Motivation and Behavior* Principle. Also, the lack of control teachers often have over planning their own instruction may be another cause for frustration and a decline in the *Planning for Instruction* Principle.

Third, the reality of obstacles faced by students because of their home lives often causes frustration for teachers. Teachers sometimes find that their values are different than students and their parents' values, causing disappointment and a possible decline in the relationship dispositions. The difference in experience and background from one's students may cause distress for a pre-service teacher. The love of a certain content or topic may stem from previous experiences, therefore making it difficult for the pre-service teacher to understand why students may not be as excited about it as they are, therefore, causing a decline in the *Making Content Meaningful* disposition.

Fourth, teachers want their students to be successful. They have high expectations going into the classroom, only to find that they may not yet have the knowledge, skills, and dispositions to help students gain academic and social success. A decline in all of the above dispositions may be attributed to the frustration pre-service teachers may feel when not all of their students meet their expectations.

Finally, time plays a role in a teacher's success, both professionally and personally. Pre-service teachers find that they lack time during the school day to plan, work with students, assess students, and communicate and collaborate with their colleagues. In addition, the barrage of paperwork, meetings, extra duties, interruptions and mandates creates frustration for the pre-service teachers. They may feel like the obligations of the job are overwhelming, not allowing them to feel like they are doing any part of their duties well, therefore causing a decrease in all of the above dispositions.

Major Findings: Question 2 Related to Setting

2a. Does the setting (urban vs. non-urban) influence the strength of the dispositions?

2b. Does the setting influence the "professional rating" of a pre-service teacher?

Statistical analysis did not indicate any difference between the settings urban and non-urban when compared with the principles, indicating an equivalent perception of dispositions for both groups in regard to the strength and emphasis of specific INTASC Principles.

There were also no significant differences between the two instructional groups or internship settings in the "professional rating," demonstrating that the requirements of the program at CSU and the Colorado Department of Education were met appropriately for each group. In addition, there was not a significant difference between the two setting factors when compared to the two sub-scales, "Student-Centered" and "Professional, Curriculum-Centered," indicating that the groups were equal in their perceptions of these subgroups.

Although statistical significance was not found, major differences between the two settings were apparent in some principles qualitatively, not only in rankings, but also in narrative responses. When focus group responses were ranked in order overall, “Student-Centered” principles 2: *Child Development* and 5: *Motivation and Behavior* were the most often cited by the urban group. In contrast, “Professionalism, Curriculum-Centered” principles 3: *Learning Styles and Diversity* and 4: *Instructional Strategies and Problem-Solving* were the most frequently cited principles for the non-urban group. The common link between the two settings is that of Principle 10: *Interpersonal Relationships*. The table below is a comparison of the top three Principles cited for focus groups within each setting, along with narrative emphases:

Table 8 - Comparison between Urban and Non-Urban Instructional Setting

	Urban Focus Group Top Three			Non-Urban Focus Group Top Three		
INTASC Principle	5: Motivation and Behavior	10: Interpersonal Relationships	2: Child Development and Learning Theory	4: Instructional Strategies and Problem-Solving	10: Interpersonal Relationships	3: Learning Styles and Diversity
Narrative Emphasis	Positive classroom environment Democratic classrooms Motivation techniques	Importance of relationships in teaching especially with students	Providing learning opportunities that respect diverse interests and abilities of students.	Writing objectives Collaboration Clear directions	Importance of relationships in teaching especially with colleagues	Understanding students’ experiences, perspectives and interests
	“Student-Centered”			“Professionalism, Curriculum-Centered”		

Through the narratives, deeper understanding can be gleaned about the strengths of dispositions, and the emphasis put on each one by the teacher candidates. The emphases added in

Table 8 supports the idea that the urban pre-service teachers are more focused on the “Student – Centered” aspects of teaching, while non-urban teacher candidates focus more on “Professionalism, Curriculum-Centered” aspects of the job. For example, even though Principle 10: *Interpersonal Relationships* is second ranked for each group, the narratives reveal a difference in emphasis within that Principle: relationships with students for the urban group versus relationships with colleagues for the non-urban group.

Within the individual reflections, both principles 2: *Child Development and Learning Theory* and 3: *Learning Styles and Diversity* were cited more often by the urban instructional group than by the non-urban group. Narrative differences were also found to have major variations within individual teacher candidate reflection responses. The table below represents major differences in narratives between candidates participating in an urban setting versus those participating in a non-urban setting for their student teaching experience:

Table 9 - Narrative Differences in Responses for Urban vs. Non-Urban Interns

Urban Highlights	Non-Urban Highlights
<ul style="list-style-type: none"> • Making content relevant for students • Positive learning environments • Democratic classrooms • Communication with students • Motivation techniques • Inquiry • Formative assessment • Authentic assessment 	<ul style="list-style-type: none"> • Instructional Strategies: <ul style="list-style-type: none"> Chunking instruction Collaborative learning Clear directions • Communication with parents • Writing objectives based on standards • Flexibility in planning • Goal-setting • Results-driven instruction

The qualitative data collected emphasizes the differences between the urban pre-service teachers and the non-urban teachers. We can see similar concerns within each

group, but emphasis within that concern highlights a different area; for example, communication with students versus communication with parents. The “Student-Centered” approach to teaching in an urban setting is stressed more, whereas the “Professionalism, Curriculum-Centered” approach is more evident in the non-urban teacher candidates’ responses. Examples of the “Student-Centered” highlights for the urban group want to create a positive learning environment where instruction and activities are relevant to students. They are concerned about motivating their students and helping them to be successful, while using formative and authentic methods to assess their students. On the other hand, the non-urban candidates are concerned about planning instruction to incorporate cooperative grouping. They also want to create lessons and objectives that meet state and national standards. Pre-service teachers who work in the non-urban setting emphasize goal setting for their students and using data to drive their instruction.

Findings Related to the Literature

Participants in this study reflected on their perceived dispositions through responses to prompts based on the 10 INTASC Principles. This supports research by Rath (2007), who encourages institutions of teacher education to select a finite set of dispositions to assess. Other researchers, such as Mullin (2003), Rebich & Hopper (2004), Schulte, et al. (2004), Singh and Stoloff (2008), Wilkerson and Lang (2007) insist that by using existing standards, confounding factors such as lack of clear definition for dispositions, and a finite list, are removed.

Quantitative findings were supported by the narratives provided by the pre-service teachers in this study. Responses from reflections based on the 10 INTASC Principles

and general focus group discussions supported the quantitative analysis. Lang insists that multiple modes of inquiry be administered when assessing affective topics such as dispositions (2005). He worries about the possibility that respondents would self-report what was “expected,” but not what was really believed or behaved. Narratives and focus group discussions centered on the teacher candidates’ experiences.

Of the ten INTASC Principles, seven were found to change significantly over time. This supports the research by Castle, et al. (2006) concluding that a developmental continuum exists for pre-service teachers. Castle contends that beginning teachers concentrate on their own performance at first, then, with experience, shift to concentrating on student performance, which may explain the changes in specific principles (both increasing and decreasing). Specific positive changes related to this idea were found in Principles 3: *Learning Styles and Diversity* and 4: *Instructional Strategies and Problem Solving*. This idea may also account for the decrease in Principle 9: *Professional Growth and Reflection*.

When perceptions of dispositions were analyzed between urban and non-urban groups, one important similarity was found: Principle 10: *Interpersonal Relationships*. This finding is supported by researchers Perez (2009) and Wentzel (1992). Both contend that caring relationships with teachers helped students to be motivated because they provided both social and emotional growth. Narratives from participants in this study focus on the importance of building relationships to improve student motivation and classroom management.

Differences found between the urban and non-urban settings and instructional groups were supported by the synthesis of literature. Findings in the synthesis were that dispositions found to be effective in urban settings were “Student-Centered”, while effective dispositions in non-urban settings focused on “Professionalism, Curriculum-Centered” aspects of teaching. When the groups were compared by percentage of responses coded within each standard, differences were noted in Principle 2: *Child Development and Learning Theory*, and Principle 3: *Learning Styles and Diversity*, with the urban group having a higher percentage of responses in both cases. Principles 5: *Motivation and Behavior* and 2: *Child Development and Learning Theory* were also in the top three ranked for the urban focus groups. The non-urban focus groups included Principles 3: *Learning Styles and Diversity* and 4: *Instructional Strategies and Problem Solving* as the top three principles cited. Creators of the TDI categorized the INTASC Principles into subscales called “Student-Centered” and “Professionalism, Curriculum-Centered.” When placed into these two categories, urban strengths are included in the “Student-Centered” subscale and non-urban strengths are included in the “Professionalism, Curriculum-Centered” subscale. Additionally, narratives from Principles 6: *Communication and Knowledge*, 7: *Planning for Instruction* and 8: *Assessment* are supported by the synthesis of literature.

Reynolds, Ross and Rakow recognized that pre-service teachers in a PDS were more confident and, because of the longer placement in a PDS, were more engaged in their self-reflection (2003). This research supports the findings in this study. Principle 9: *Professional Growth and Reflection* did not show a significant change when analyzed quantitatively, but was found to have major changes when narratives were analyzed.

Unexpected Results

One purpose of this study was to analyze whether the setting in which a pre-service teachers completed their internship affected their perceived disposition. The original intent was to examine internship only. However, one mode of data collected was from focus group discussions, which were conducted by their original instructional group. Many emergent themes were found within these instructional groups – not within the internship settings. The group participating in the Adams City instructional group was taught mainly by practicing teachers within that school, while the Fossil Ridge group was instructed by CSU professors. It is possible that the educators from Adams City emphasized student relationships and classroom management while the CSU professors were more theory-based in their instruction. The findings suggest that the Adams City (urban) group was more “Student-Centered,” while the Fossil Ridge (non-urban) group was more “Professionalism, Curriculum-Centered.” Though there were differences between the participants by student-teaching setting, the significant finding is that the instructional setting is what made the difference. These results seem to be a confounding factor in this study, which could be avoided in future studies by instructing all participants in a similar setting, then analyzing the internship experiences between urban and non-urban settings.

Another unexpected outcome in the analysis of the data was the decrease in some principles, both through statistical analysis and narrative analysis. Negative responses in some principles voice frustrations with apathetic students, struggles with classroom management, and making content relevant to students. This downturn may be attributed to beginning teachers being idealistic at the beginning, then discovering the complexity

of successful teaching. It may also be possible that pre-service teachers do not understand the requirements at the beginning of the program and rate themselves higher, then begin to understand how much they really do not know by the end of the internship.

While students generally remained positive throughout their internship experiences, some negative responses emerged through the coding process. Further examination of these responses was linked to the same five participants. The majority of these cases participated in urban experiences. Negative responses centered on apathetic students, lack of critical thinking skills, and the difficulty in making content relevant. This may be due to the intern's personality and a negative outlook or lack of tolerance for certain types of students. These results may also be attributed to the difficulties presented in teaching diverse students.

Conclusions

The emphasis on producing quality teachers has gained the attention of accrediting agencies and programs of teacher education alike. Empirical evaluation of program components is necessary to gain insight into how to prepare teachers to be successful in any setting. Researchers such as Talbert-Johnson (2006) and Wayne et al. (2003) contend that there is a relationship between the quality of a teacher and dispositions. Some researchers are skeptical about defining and assessing dispositions, but most agree that pre-service teachers can benefit from instruction and experiences that encourage positive dispositions (Burant, Chubbuck, & Whipp, 2007; Diez, 2007; as cited in Thompson & Franklin, 2009).

Some significant components of teacher education programs mentioned by researchers in the field include: length of internship experience, setting of internship experience, and dispositions found in successful teachers. Researchers, including Stairs (2006), state that some settings, in addition to experience, affect the development of dispositions. Accreditation agencies have taken this research to heart and many now require teacher preparation programs to assess and report on teacher dispositions. Because of the lack of clear, consistent definition, and lack of a defined common list of dispositions, assessment of dispositions has been difficult. Using an existing list of dispositions and definition set forth by INTASC, is one way to remove these confounding factors in research. Data from this study was self-reported; however, many modes of inquiry were used to ensure confidence in the results.

The purpose of this study was to investigate whether perceived dispositions in pre-service teachers are influenced by experience and setting (urban or non-urban). The findings support changes in dispositions over time spent in the internship, with seven out of ten INTASC Principles showing significant change over time. This evidence attests that dispositions can and do change when pre-service teachers are given authentic experiences in the classroom. Qualitative results were supported by narratives very strongly in a positive manner for Principles 4: *Instructional Strategies* and 9: *Professional Growth and Reflection*. Narratives also indicated a significant positive change for Principle 3: *Learning Styles and Diversity*. Negative change was noted in Principle 7: *Planning for Instruction*. Curran and Murray (2008) say that adding “carefully constructed challenges” can develop dispositions in pre-service teachers. In addition, Parkinson’s (2008) research connects theory and practice by providing

“systematic and intentional” field experiences. Thoughtful planning of pre-service teachers’ experiences within the teacher education programs can help in developing desirable dispositions.

When quantitative data were analyzed, no significant difference was found when comparing the two internship settings (urban and non-urban) or the instructional groups. Due to the small sample size, these results should be interpreted with caution. Narratives from participants do show differences between the groups, not only in the number of responses per principle, but also in content of the responses. No empirical studies could be found comparing urban teaching to non-urban teaching related to dispositions, but a synthesis of research indicates that the difference may be in the type of dispositions displayed by the teacher. Findings support this idea, with participants both in the urban setting for internship and for instructional group perceiving stronger dispositions to be “Student-Centered.” The non-urban group perceived stronger dispositions in the “Professionalism, Curriculum-Centered” realm. This study suggests that successful teachers who work with diverse populations require more “Student-Centered” dispositions to be successful, while non-urban teachers require more “Professionalism, Curriculum-Centered” dispositions. Differences were found within the narratives provided by participants for many standards. Urban participants generally commented on making content relevant for students, positive learning environments, democratic classrooms, communication with students, and motivation techniques, inquiry, formative assessment, and authentic assessment as areas of growth and concern. Non-urban participants included the following as areas of growth: instructional strategies such as chunking instruction, collaborative learning, and clear directions, communication with

parents, writing objectives based on standards and being flexible in their planning, and goal-setting and results driven instruction.

These results can inform programs of teacher education as to how to prepare teachers to work in any setting. Talbert-Johnson (2006) contends that dispositions can be developed by deliberately planning and assessing throughout the teacher preparation program. Thoughtfully planning experiences and instruction based on what works for all students could help to prepare teachers to be successful in any setting.

This study has the potential to contribute to the understanding of the development of desirable dispositions in pre-service teachers. Creating internship experiences that are challenging and thoughtful, as well as integrating interns in authentic settings will help to develop desirable dispositions. Principles that were not developed as well as others in this study (Principles 6: *Communication and Knowledge*, 8: *Assessment* and 9: *Professional Growth and Reflection*) could be strengthened by creating experiences that force pre-service teachers to develop the desired disposition.

Recommendations

Additional inquiry into the development of desired dispositions is necessary in order to generalize these results. This study is delimited to one university and a low response rate for the qualitative analysis. The components of teacher preparation considered in this study were the assessment of teacher dispositions as related to setting and internship experience. Though not intentionally analyzed, the instructional setting emerged as having a more significant impact on the development of dispositions than the student-teaching setting. Final portfolios and a more in-depth analysis of outside

evaluation might give more insight on the development of dispositions as well as increasing the confidence of the results. In addition, other factors, such as content area and level of teaching (elementary, middle, or high school) were not considered. It would be of notable interest to determine what dispositions should be developed to be successful in those areas.

It is necessary that researchers continue to study the assessment of dispositions and work to find a common definition. In addition, the use of a common instrument would assist in removing confounding factors such as lack of definition and a clearly defined list of dispositions.

Lastly, the emphasis on building 21st century skills in our students may be an important factor in developing dispositions in teachers. To respond to the social and political demands on education, the original INTASC Principles and Disposition Indicators from 1992 have been revamped and are available for public comment in July of 2010 (InTASC, 2010). Now including developmental stages for teachers throughout their careers, the standards no longer are for beginning teachers only, so the word “New” has been taken out of the acronym; thus, the new name is InTASC. Common 21st century themes throughout the new standards include collaboration, critical thinking, and technology. The research-based document still has ten standards, but two have changed to focus more on the learner. The ten standards have also been put into four categories: The Learner and Learning, Content Knowledge, Instructional Practice, and Professional Responsibility. Research using the new InTASC standards is imperative as 21st century skills are emphasized in today’s classrooms.

The results of this research lead to three recommendations for teacher educators:

- 1.) The development of “Student-Centered” dispositions in urban settings and “Professionalism, Curriculum-Centered” dispositions in non-urban settings calls for internship and student-teaching placements to be held in a variety of settings so that the full menu of dispositions can be developed.
- 2.) Dispositions can be developed over time. Providing several experiences throughout a pre-service teacher’s program will help them to develop desired dispositions.
- 3.) In order to develop the desired positive dispositions in teacher candidates, a variety of experiences and scenarios should be intentionally provided so that candidates are educated about the realities of teaching.

Benefits of Mixed Methods Design for this Research

Statistical analysis in this study revealed significant differences in some principles from fall to spring semesters; however, analysis did not show any significance in the differences between the urban and non-urban groups. When qualitative analysis was conducted, major themes emerged between the two groups, allowing an in-depth analysis and clear results about the differences between the two settings. Without the narratives, the study of the urban and non-urban groups would not have revealed anything.

The process of combining both quantitative and qualitative analysis allows the researcher to find themes that help to explain the findings. The narrative responses in this study, for the most part, inform and support quantitative findings. Though major differences may not be seen quantitatively or by ranking qualitative responses,

differences can be found within the responses. Specifically, interns participating in an urban internship or in the urban instructional group are generally more “Student-Centered,” while those in the non-urban setting, either by internship or by instructional group, tend to be more “Professional, Curriculum-Centered.”

Concluding Remarks

The goal of this study was to add to the empirical research base on the development of teacher dispositions in pre-service teachers. Articles found relative to dispositions debated definitions of dispositions, informed readers about the assessment of dispositions, or assessing actual dispositions. No empirical studies were found linking the development of dispositions to experience or setting. This study reveals that dispositions can and do change over time; however, some may change negatively without thoughtful challenges and deliberate experiences. Quantitative analysis supported by narratives showed great improvements in the development of INTASC Principles 4: *Instructional Strategies* and 9: *Professional Growth and Reflection*. Narratives also indicated a significant positive change for Principle 3: *Learning Styles and Diversity*. Negative change was noted in Principle 7: *Planning for Instruction*. The narrative responses from reflections and focus group discussions revealed that participants had experiences with the development of specific dispositions. Pre-service teachers in this study also revealed change in dispositions through responses obtained from the TDI. INTASC Principles allowed for the assessment of dispositions as well as provided a framework for qualitative analysis. In addition, narratives provided by the interns helped to explain the quantitative results (Cresswell & Plano-Clark, 2007).

Further analysis of the assessment of dispositions in pre-service teachers is necessary. Specific programmatic components were studied, but there are many more to analyze. Also, new findings can support the changes in teacher preparation based on the necessary skills for developing 21st century learners. This study revealed the value of having authentic internship experiences, including time in the classroom and appropriate settings to develop desired dispositions. Continuing study of pre-service teachers in various instructional and internship settings could strengthen the result of this inquiry. Replicating this study at other institutions and using the same instrument would also enable results to be generalized. Additional analysis using portfolios, outside observations, and the new InTASC standards is also imperative.

In this time of change, teacher educators must evaluate and improve programs to ensure that quality teachers emerge who are able to help all students succeed. As student demographics continue to change and teaching increases in complexity, it is important to define the performances, essential knowledge, and critical dispositions needed by all teachers to help all students be successful.

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APPENDIX A – INTASC Principles and Disposition Indicators

Principle 1: **Making content meaningful**

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

- 1.1 The teacher realizes that subject matter knowledge is not a fixed body of facts but is complex and ever-evolving. He or she seeks to keep abreast of new ideas and understandings in the field.
- 1.2 The teacher appreciates multiple perspectives and conveys to learners how knowledge is developed from the vantage point of the knower.
- 1.3 The teacher has enthusiasm for the discipline he or she teaches and sees connections to everyday life.
- 1.4 The teacher is committed to continuous learning and engages in professional discourse about subject matter knowledge and children’s learning of the discipline.

Principle 2: **Child development and learning theory**

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

- 2.1 The teacher appreciates individual variation within each area of development, shows respect for the diverse talents of all learners, and is committed to help them develop self-confidence and competence.
- 2.2 The teacher is disposed to use students’ strengths as a basis for growth, and their errors as an opportunity for learning.

Principle 3: **Learning styles/diversity**

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

- 3.1 The teacher believes that all children can learn at high levels and persists in helping all children achieve success.
- 3.2 The teacher appreciates and values human diversity, shows respect for students’ varied talents and perspectives, and is committed to the pursuit of “individually configured excellence.”
- 3.3 The teacher respects students as individuals with differing personal and family backgrounds and various skills, talents, and interests.
- 3.4 The teacher is sensitive to community and cultural norms.

- 3.5 The teacher makes students feel values for their potential as people, and helps them learn to value each other.

Principle 4: **Instructional strategies/problem solving**

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

- a. The teacher values the development of students' critical thinking, independent problem solving, and performance capabilities.
- b. The teacher values flexibility and reciprocity in the teaching process as necessary for adapting instruction to student responses, ideas, and needs.

Principle 5: **Motivation and behavior**

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

- 5.1 The teacher takes responsibility for establishing a positive climate in the classroom and participates in maintaining such a climate in the school as a whole.
- 5.2 The teacher understands how participation supports commitment, and is committed to the expression and use of democratic values in the classroom.
- 5.3 The teacher values the role of students in promoting each other's learning and recognizes the importance of peer relationships in establishing a climate of learning.
- 5.4 The teacher recognizes the value of intrinsic motivation to students' lifelong growth and learning.
- 5.5 The teacher is committed to the continuous development of individual students' abilities and considers how different motivational strategies are likely to encourage this development for each student

Principle 6: **Communication/knowledge**

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

- a. The teacher recognizes the power of language for fostering self-expression, identity development, and learning.
- b. The teacher values many ways in which people see to communicate and encourages many modes of communication in the classroom.
- c. The teacher is a thoughtful and responsive listener.
- d. The teacher appreciates the cultural dimensions of communication, responds appropriately, and seeks to foster

culturally sensitive communication by and among all students in the class.

Principle 7: **Planning for instruction**

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

- 7.1 The teacher values both long-term and short-term planning.
- 7.2 The teacher believes that plans must always be open to adjustment and instruction based on student needs and changing circumstances.
- 7.3 The teacher values planning as a collegial activity.

Principle 8: **Assessment**

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

- 8.1 The teacher values ongoing assessment as essential to the instructional process and recognizes that many different assessment strategies, accurately and systematically used, are necessary for monitoring and promoting student learning.
- 8.2 The teacher is committed to using assessment to identify student strengths and promote student growth rather than to deny students access to learning opportunities.

Principle 9: **Professional growth/reflection**

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

- 9.1 The teacher values critical thinking and self-directed learning as habits of mind.
- 9.2 The teacher is committed to reflections, assessment, and learning as an ongoing process.
- 9.3 The teacher is willing to give and receive help.
- 9.4 The teacher is committed to seeking out, developing, and continually refining practices that address the individual needs of students.
- 9.5 The teacher recognizes his or her professional responsibility for engaging in and supporting appropriate professional practices for self and colleagues.

Principle 10: **Interpersonal relationships**

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

being.

- 10.1 The teacher values and appreciates the importance of all aspects of a child's experience.
- 10.2 The teacher is concerned about all aspects of a child's well-being (cognitive, emotional, social, and physical) and is alert to signs of difficulties.
- 10.3 The teacher is willing to consult with other adults regarding the education and well-being of his or her students.
- 10.4 The teacher respects the privacy of students and confidentiality of information.
- 10.5 The teacher is willing to work with other professionals to improve the overall learning environment for students.

APPENDIX B – Open-Ended Reflection Items

Open-ended questions based on INTASC Principles and Disposition Indicators

- (10) Describe the last time you collaborated with a colleague. What did you talk about? What did you do? Did you use the product/advice from that collaboration? Would you collaborate with that person again?
- (9) Describe the last thing you learned about teaching. Have you used it in your classroom? Why or why not?
- (5) Describe a student who is apathetic in your class. What have you done to motivate this student to learn? Has it worked? What is your next step with this student?
- (6) Describe an activity that you've used in the classroom where students worked together. What worked well? What will you change for next time?
- (4) Describe a strategy you use in your classroom to foster critical thinking. What activity was connected to that teaching strategy? How did your students respond?
- (1) Describe a topic that you've taught that related directly to your student's lives. What activity did you use to reinforce their learning? Do you feel like the students learned the material? How do you know?
- (3) Think of a student in your class that is different from all others. Describe him/her. What do you do in your daily routine or during your lesson to make sure that this student is engaged? How does he/she learn the best? How do you know?

APPENDIX C - Teacher Disposition Index (TDI) with Factor Loadings

	<i>Student-Centered Subscale</i>	<i>Factor 1</i>	<i>Factor 2</i>
1	I believe a teacher must use a variety of instructional strategies to optimize student learning. (P2)	.769	.349
2	I understand that students learn in a many different ways. (P3)	.819	.322
3	I demonstrate qualities of humor, empathy, and warmth with others. (P5)	.820	.305
4	I am a thoughtful and responsive listener. (P6)	.646	.464
5	I assume responsibility when working with others. (P7)	.688	.485
6	I believe that all students can learn. (P2)	.667	.433
7	I believe it is important to involve all students in learning. (P3)	.822	.420
8	I believe the classroom environment a teacher creates greatly affects students' learning and development. (P2)	.807	.391
9	I view teaching as an important profession. (P9)	.896	.274
10	I understand that teachers' expectations impact student learning. (P3)	.768	.386
11	I view teaching as a collaborative effort among educators. (P7)	.669	.381
12	I understand students have certain needs that must be met before learning can take place. (P2)	.743	.431
13	I am sensitive to student differences. (P3)	.750	.460
14	I communicate caring, concern, and a willingness to become involved with others. (P6)	.713	.421
15	I am punctual and reliable in my attendance. (P9)	.631	.393
16	I maintain a professional appearance. (P9)	.637	.376
17	I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence. (P2)	.713	.447
18	I respect the cultures of all students. (P3)	.784	.400
19	I honor my commitments. (P9)	.706	.468
20	I treat students with dignity and respect at all times. (P5)	.727	.424
21	I am willing to receive feedback and assessment of my teaching. (P9)	.690	.456
22	I am patient when working with students. (P5)	.692	.471
23	I am open to adjusting and revising my plans to meet student needs. (P7)	.723	.488
24	I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others. (P9)	.779	.462
25	I believe it is important to learn about students and their community. (P7)	.855	.337

	<i>Professionalism, Curriculum-Centered Subscale</i>	<i>Factor 1</i>	<i>Factor 2</i>
1	I am committed to critical reflection for my professional growth. (P9)	.406	.631
2	I cooperate with colleagues in planning instruction. (P7)	.441	.668
3	I actively seek out professional growth opportunities. (P9)	.323	.721
4	I uphold the laws and ethical codes governing the teaching profession. (P9)	.494	.611
5	I stimulate students' interests. (P1)	.430	.754
6	I value both long term and short term planning. (P7) .	.498	.594
7	I stay current with the evolving nature of the teaching profession. (P9)	.203	.748
8	I select material that is relevant for students. (P1)	.381	.762
9	I am successful in facilitating learning for all students. (P3)	.317	.740
10	I demonstrate and encourage democratic interaction in the classroom and school. (P5)	.420	.696
11	I accurately read the non-verbal communication of students. (P6)	.432	.521
12	I engage in discussions about new ideas in the teaching profession. (P9)	.218	.713
13	I select material that is interesting for students. (P1)	.445	.723
14	I provide appropriate feedback to encourage students in their development. (P2)	.499	.614
15	I engage in research-based teaching practices. (P9)	.233	.721
16	I create connections to subject matter that are meaningful to students. (P1)	.459	.704
17	I listen to colleagues' ideas and suggestions to improve instruction. (P7)	.487	.589
18	I take initiative to promote ethical and responsible professional practice. (P9)	.449	.762
19	I communicate effectively with students, parents, and colleagues. (P9)	.483	.611
20	I work well with others in implementing a common curriculum. (P7)	.427	.670

Note. After each item the corresponding INTASC (1991) principle is specified, such as P1 for Principle 1. Items were developed from the following sources: Barton et al. (1994), Cudahy et al. (2002), Keirsey (1998), and Schaffer (2003).

APPENDIX D – Permission to use the Teacher Dispositions Index

November 14th, 2009
Dear Dr. Schulte,

As a graduate student at Colorado State University and a faculty member of the School of Teacher Education and Principal Preparation, I am researching and writing my dissertation on assessing the development of dispositions of pre-service teachers in both urban and suburban settings. Your article, The Development and Validation of the Teacher Disposition Index was very informative and your instrument very well done. I am interested in using your instrument in my dissertation study. I would like your permission to modify the instrument to include items pertaining to INTASC disposition standards 4, 8 and 10 for the purpose of my study. These adaptations will allow me to correlate the Likert scale items to reflection items that I've asked our candidates to complete.

If you consent to my using the instrument, could you please reply to this e-mail indicating permission to use the instrument and to also include a copy of it as an appendix to my dissertation? You will be given credit and cited in the dissertation and in future articles regarding its use.

Thank you for your time and consideration and for creating a professional instrument that will assist teacher education programs in assessing pre-service teacher dispositions.

Sincerely,

Heidi Frederiksen, M.Ed.
Key Advisor, STEPP
School of Teacher Education and Principal Preparation
Colorado State University
(970) 491-6534

Hi Heidi,

Thank you for your interest in our dispositions instrument. You may modify the instrument for use in your dissertation and include it in the appendix.

Best wishes,
Laura
Laura E. Schulte, Ph.D.
Professor Emerita, College of Education
21830 Meadowview Parkway
Council Bluffs, IA 51503
(712) 366-5746

APPENDIX E – IRB Exempt Letter

Research Integrity & Compliance Review Office
Office of Vice President for Research
Fort Collins, CO 80523-2011
(970) 491-1553
FAX (970) 491-2293

DATE: July 14, 2009
TO: Donna Cooner, Education Heidi Frederiksen, Education
FROM: Janell Barker, IRB Administrator Research Integrity & Compliance Review Office
TITLE: Assessing Pre-Service Teacher Dispositions for Master's Licensure Students at CSU
IRB ID: 049-09H **Review Date:** July 14, 2009

The Institutional Review Board (IRB) Administrator has reviewed this project and has declared the study exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b)(2). The IRB determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as proposed in the Exempt application,** including obtaining and documenting (signed) informed consent if stated in your application or if required by the IRB.
- **Any modification of this research should be submitted to the IRB through an email to the IRB Administrator, prior to implementing any changes,** to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.
- **Please notify the IRB if any problems or complaints of the research occur.**

Please note that you must submit all research involving human participants for review by the IRB. **Only the IRB may make the determination of exemption,** even

if you conduct a similar study in the future.