

FIRST-YEAR TEACHERS' DISPOSITIONS:
EXHIBITED AND PERCEPTION OF BEING TAUGHT

by

SHANE KIRCHNER

B.A., McPherson College, 1992
M. Ed., Wichita State University, 2001

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Curriculum and Instruction
College of Education

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Abstract

The National Council for the Accreditation of Teacher Education (NCATE) standards adopted in 2000 mandated the assessment of teacher dispositions. However, the lack of specificity of the construct has led to an environment where many institutions struggle to develop high-quality disposition assessments. The result is a hodgepodge of constructs and systems; some that work, some that do not.

This quantitative study used a modified version of the Teacher Disposition Index (TDI) to identify the extent to which first-year teachers' self-reported exhibiting the dispositions and whether they perceived they were taught the dispositions by the teacher education programs from which they graduated. Responses to the TDI were compared based on type of college or university from which they graduated, gender and age. The TDI, a 45 item, Likert-type survey, is aligned with the INTASC standards.

Data were analyzed using frequency distributions, analysis of variance, and chi square tests. An aggregate review of all 45 dispositions shows 93.6% of responses were positive for "agree" or "strongly agree" that they exhibit the identified dispositions and 88.51% of responses were positive for perceiving they were taught the dispositions. Overall, there was no significant difference identified between any groups (by school type, gender, or age) except for in exhibited dispositions compared by gender ($p < .05$). When drilling down to specific dispositions, an occasional significant difference was identified.

In general, the respondents in this state report they exhibit the identified dispositions at a high rate and they report the teacher education programs are teaching these dispositions. The following recommendations are made based on the results of this study. First, colleges and universities can teach more interpersonal communications skills as part of the required

curriculum. More overt instruction of dispositions, especially at smaller institutions, is needed.

Teacher education programs could place more emphasis on the development of dispositions of male teacher education candidates. Novice teachers could benefit from more instruction of informal assessment skills and flexibility in instruction.

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Approved by:

Major Professor
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Chapter 1 - Overview

Introduction

Nobody cares how much you know until they know how much you care.

-Teddy Roosevelt

Dispositions, by one name or another, have long been studied as a critical component of teacher effectiveness (Taylor & Wasicsko, 2000). In the late 1980's the triad of knowledge, skills, and dispositions was added to the lexicon of teacher education. This triad has since become a guidepost for many teacher education programs. The National Council for the Accreditation of Teacher Education (NCATE) standards adopted in 2000 mandated the assessment of teacher dispositions. However, other than fairness and teaching all learners, specific dispositions were not identified. Consequently, teacher education programs seeking NCATE (re)accreditation identify their own specific dispositions and assess them. The resulting lack of uniformity has created a hodgepodge of dispositions and assessment systems. This study examines the extent to which novice teachers self-reported the exhibition of 45 selected dispositions in an effort to describe the current state of affairs in the curriculum, instruction, and assessment of teacher dispositions in teacher education programs.

Discussion in this chapter is organized in the following sections: (1) background, (2) statement of the problem, (3) purpose of the study, (4) research questions (5) significance of the study, (6) conceptual framework, (7) overview of the methodology, (8) delimitation and limitations of the study, (9) definition of terms, and (10) organization of the dissertation.

Background

Historically, the profession of teacher education focused on content knowledge and pedagogy. Teacher education programs (TEPs) have strived to provide the best in the science of

teaching and learning while also relying heavily on the colleges of arts and sciences to help provide the content knowledge. In the 1980's the third element of dispositions was added to this well established core.

Although Taylor and Wasicsko (2000) state “researchers have been examining the dispositions (albeit by names such as attitudes, perceptions, beliefs, etc.) of effective teachers for decades,” (p. 2), the emphasis on dispositions in the teaching profession started in earnest slightly more than 25 years ago. The first identified use of the term dispositions in describing teachers is found in a 1985 report by Katz and Raths (Diez, 2007; Freeman, 2003). An early catalyst in the drive towards assessing dispositions was in reaction to the publication of *A Nation at Risk*, the scathing 1983 report that initiated increased awareness of and accountability regarding the teaching profession. In 1986, the Carnegie Task Force on Teaching as a Profession issued its report, *A Nation Prepared: Teachers for the 21st Century*, calling for the establishment of a National Board for Professional Teaching Standards (NBPTS). The following year the National Board was formed and in 1989 the policy statement, *What Teachers Should Know and Be Able to Do* was published. This document became the cornerstone of later National Board standards. These standards are based on five core propositions which, in turn, highlight key teacher dispositions (NBPTS, 2002).

In 1992, based on the five propositions established by the National Board, the Interstate New Teacher Assessment and Support Consortium (INTASC) drafted its teacher standards (INTASC, 1992). These standards were developed by representatives from seventeen state education agencies and were quickly regarded as the new measuring stick of teachers. These standards established the triad of teacher qualities of knowledge, skills, and dispositions. Qualities that remain in use today.

Another critical influence on dispositions in teacher education came in 2000. The National Council for Accreditation of Teacher Education (NCATE), one of two teacher education accrediting bodies recognized by the U.S. Department of Education (2011), updated its standards, requiring the assessment of teacher dispositions (NCATE, 2001). Currently, 657 institutions are accredited and nearly 100 others are seeking accreditation (Wise, 2011). “In 23 states all public teacher education institutions are NCATE accredited and a majority of the teacher education institutions are NCATE accredited in 31 states” (NCATE, 2011). Consequently, NCATE wields substantial power in the formation of policy. Thus, when NCATE modified its standards to include the assessment of dispositions, all institutions seeking accreditation or reaccreditation were mandated to implement some sort of assessment system regarding dispositions. It certainly appears that the triad of knowledge, skills, and dispositions, as established by INTASC, is here to stay.

However, teacher education programs struggle to incorporate these three elements into the curriculum and tend to focus more on knowledge and skills than dispositions (Colton & Sparks-Langer, 1993). This imbalance is most likely due to various factors such as: the knowledge and pedagogy of future teachers are easily assessed through traditional means of exams, papers, and observations in the field; the subjective nature of dispositions resists such easy assessment; and the lack of a common definition of dispositions. This lack of attention does not mean that disposition assessments are seen as unimportant. Some scholars- such as Wilkerson and Lang (2007)- posit a hierarchal relationship among the triad of knowledge, skills, and dispositions with dispositions at the apex.

Dispositions may very well be the most important element in the assessment system. *We do what we value.* [emphasis in original] We can know how to do something but not want

to do it—and so we do not do it! Skills and dispositions are different, but symbiotic, constructs. (Wilkerson & Lang, 2007, p. 7)

Problem

Standard 1 of the 2001 NCATE standards states that teacher education programs must prepare candidates who “know and demonstrate the content, pedagogical, and professional knowledge, skills and dispositions necessary to help all students learn” (NCATE, 2001, p. 10). As previously mentioned, knowledge and skills are easily measured through traditional means. However, teacher educators are also required to assess the more intangible attitudes, values, and beliefs referred to as dispositions.

The most current NCATE definition of dispositions is:

Professional Dispositions. Professional attitudes, values, and beliefs demonstrated through both verbal and non-verbal behaviors as educators interact with students, families, colleagues, and communities. These positive behaviors support student learning and development. NCATE expects institutions to assess professional dispositions based on observable behaviors in educational settings. The two professional dispositions that NCATE expects institutions to assess are *fairness* [emphasis in original] and the belief that all students can learn. Based on their mission and conceptual framework, professional education units can identify, define, and operationalize additional professional dispositions. (NCATE, 2008, p. 89)

Other than the two dispositions expected to be assessed, the NCATE definition offers few specifics. Freeman (2007) claims that the vagueness of the NCATE definition is intentional in the hope that it will promote discussion and, consequently, encourage the profession to grow. To many, however, the lack of a concrete operational definition has created a chaotic environment

within the profession where each institution creates and defines its own set of dispositions and then develops an assessment system with which to evaluate its candidates. Many institutions struggle to develop high-quality disposition assessment systems leading dispositions to be seen as the weakest part of the program despite the fact that, as stated earlier, dispositions may be the most important element of teaching. The result is a hodgepodge of constructs and systems; some that work, some that do not.

Some researchers (Damon, 2007; Murray, 2007) have proposed that until a common definition emerges the profession needs to drop the push for dispositions assessment. Others (Caspi & Shiner, 2006) even question if it is possible to teach dispositions and claim them to be innate characteristics of human beings. Obviously the debate on dispositions rages on. In an editorial in the *Journal of Teacher Education*, Borko, Liston, and Whitcomb (2007) suggest that those engaged in this debate are at times so far from each other philosophically that it is “not so much quibbles over apples and oranges, but rather over apples and fishes” (p. 360).

It is through or because of this debate that some headway is being made. In the past eight years, the National Network for the Study of Educator Dispositions, based at Northern Kentucky University, has held six symposia exploring and fostering teacher dispositions (NNSSED, 2010). Furthermore, a number of assessment systems have been developed (Lamber, Curran, Prigge & Shorr, 2005; Richardson & Onwuegbuzie, 2004; Shulte, Edick, Edwards, & Mackiel, 2004; Singh & Stoloff, 2008; Wasicsko, 2002; Wilkerson & Lang, 2007).

Purpose

The purpose of this study is to identify the extent to which novice teachers’ self-reported dispositions differ according to size and/or religious affiliation of the college or university from

which they graduated. Additionally, it identifies the extent to which the novice teachers perceive they were taught these dispositions by the teacher education program from which they graduated.

Research questions

Three research questions are used to explore this topic.

- 1) To what extent do novice teachers self-report that they exhibit positive teacher dispositions?
- 2) To what extent do novice teachers perceive they were taught these same dispositions?
- 3) Do graduates of small, private, church affiliated Institutions of Higher Education (IHEs) display the assessed dispositions at the same rate as graduates of large, public, secular universities?

Significance

Assuming dispositions to be the most important of the triad of knowledge, skills, and dispositions, the argument can be made that it is less important if a teacher education program teaches and/or assesses dispositions than if the desired dispositions are being exhibited by the teachers themselves. Therefore, the importance of this study is to see, first and foremost, if novice teachers report they exhibit dispositions deemed important (as aligned with INTASC standards).

Additionally it is hoped that through the review and analysis of exhibited dispositions insight can be gained in refining the definition of teacher dispositions. In essence, by identifying the most commonly exhibited dispositions, a working definition of teacher dispositions for this population may be determined and the construct more clearly defined. As previously mentioned, a refined definition is needed within the profession. This study will contribute to the growing

body of research and as Thornton (2006) suggests, it is through additional study that the construct will be defined and an operational definition will be developed.

The results of this study should be useful to practitioners. Many TEPs are still struggling to clarify their methods of dealing with dispositions. Meaningful results can be used by TEPs to improve or modify which dispositions are emphasized and how they are taught. More specifically, the results should indicate which dispositions are most and least exhibited and which dispositions novice teachers perceive they were or were not taught.

Conceptual Framework

Standard 1 of the 2000 NCATE standards identifies that teacher education programs must prepare candidates who “know and demonstrate the content, pedagogical, and professional knowledge, skills and dispositions necessary to help all students learn” (p. 10). Central to this statement is the triad; knowledge, skills, and dispositions. Generally teacher education programs have little trouble incorporating knowledge and skills, but dispositions tend to be more complicated. Acknowledging that all three components of the triad (knowledge, skills, and dispositions) are important, the diagram in Figure 1 is used to visualize the role of dispositions in teacher education.

The knowledge and skills that a candidate acquires while completing a teacher education program are funneled through her/his dispositions to create the teacher she/he becomes. It is then this teacher that influences the student in the classroom.

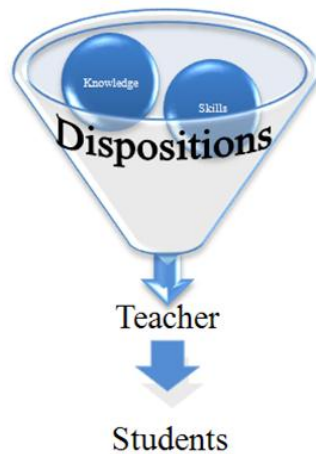


Figure 1. Conceptual Framework

Methodology

The population for this study consisted of first-year teachers in public schools in a Midwestern state in 2010-2011 who graduated from NCATE accredited institutions in the same state. First-year teachers were selected due to their recency of graduation and the likelihood of exhibiting the dispositions espoused by the institution from which they graduated and the likelihood of recalling if those same dispositions were taught. However, the researcher acknowledges no causality in the exhibited dispositions and the programs' disposition policies.

The Teacher Disposition Index (TDI) was the selected survey tool for this investigation. The TDI is a 45 item, Likert-type survey originally developed at the University of Nebraska, Omaha and is aligned with the INTASC standards (Appendix A).

In a review of the literature, the TDI appears to be the only instrument that has been determined to be reliable and have content validity in assessing teacher candidate dispositions based on the INTASC standards (Schulte, Edick, Edwards, & Mackiel, 2004). Consequently, the TDI has been used as the principle instrument for at least three other studies (Keiser, 2005; Pottinger, 2009; Turkmen, 2009) and adapted for use by at least two IHEs as part of their

disposition assessment systems (University of North Texas, 2011; Wayne State College, 2011). The survey included two additional sections: a demographics section to facilitate processing the data, and a simple Yes/No response item associated with each of the 45 items on the TDI to indicate if the respondents felt their teacher education program taught them that indicator. A sample of the TDI with modifications looks as follows:

Please circle the indicator that best represents you.

Disposition Indicator	SD	D	N	A	SA	My teacher education program taught this disposition
1. I stimulate students' interest.	1	2	3	4	5	Yes No

SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

After gathering potential names of the eligible population and securing IRB approval, a letter seeking participation in the study was sent electronically. The survey was administered online. To ensure anonymity, each participant was given a unique code that was used to identify participation. Three attempts were made to solicit responses. This protocol is suggested by Fowler (1993) and Krathwohl (1998).

Data analysis included frequency of exhibited teacher dispositions, frequency of perception of being taught the dispositions, and comparison of the exhibited dispositions based on institution type, gender of respondents, and age of respondents.

Delimitations and Limitation

This study is delimited by several factors. First, the population consisted of first-year teachers in a Midwestern state who graduated from NCATE accredited, initial teacher education programs in the same state. Another delimitation is that the study only looked at initial teacher education programs. NCATE does ask institutions to assess dispositions of candidates in all

programs such as graduate level licensure, school administration, counseling, and others, but, those programs were not explored.

A number of limitations also will affect the generalizability of the results. First, each teacher education program is unique with an individual conceptual framework as its guide. Thus, the dispositions on which a particular program focuses may be slightly different than the next institution. That being said, the dispositions focused on in this study are directly aligned to the INTASC standards which have generally been accepted as the “gold standard” of standards in teacher education.

Second, although the TDI was validated and proved reliable, the survey questions may still be open to interpretation by the respondents. Thus, there may be some inconsistency in the results. Third, with every year’s experience a novice teacher gains, his or her dispositions are bound to change. Therefore, these novice teachers may exhibit dispositions gained or modified on the job or student teaching and not as a result of attending their particular teacher education program. To combat this limitation, first-year teachers were selected for the study.

Fourth, self-reported data has the inherent weakness of bias and is based on memory, which is fallible. However biased the self-reported data may be, it is reality for the respondents. Consequently, their behaviors and exhibited dispositions are based on their perception of reality. Finally, the assumption is made that the respondent receiving the survey is the actual one completing it and that the responses are truthful.

Terms

Dispositions. Lasting, deeply-embedded qualities, characteristics, and personality traits manifested in choices and displayed as actions. Dispositions are a tendency to behave in a particular manner and are predictive of future action.

IHE. Institution of Higher Education.

INTASC. Interstate New Teacher Assessment and Support Consortium

Large, public university. An institution that produced more than 60 teacher education program completers based on the 2008-2009 state Title II report. All institutions of this size are also public universities.

NCATE. National Council for the Accreditation of Teacher Education.

Novice Teacher. A teacher in his or her first year of teaching.

Religious affiliated institution. A college or university founded by and/or associated with a religious group. In this case, all are Christian.

Small, private college or university. A college or university with 60 or fewer teacher education program completers based on the 2008-2009 state Title II report. All colleges and universities of this size are also private and religiously affiliated.

TDI. Teacher Dispositions Index. A quantitative survey instrument developed and validated at the University of Nebraska at Omaha that measures the dispositions of teachers perceived to be effective. It is aligned to the ten principles of the Interstate New Teacher Assessment and Support Consortium (Schulte, Edick, Edwards, & Mackiel, 2004).

TEP. Teacher Education Program.

Organization of the dissertation

The rest of this dissertation follows this organizational structure. Chapter 2 is a review of literature pertinent to the study of teacher dispositions including the following areas a) a historical perspective, b) exploration of the debate surrounding dispositions in teacher education, c) a review of current practices in instruction and assessment of dispositions. Chapter 3

describes the research methods and procedures. The data results are presented in Chapter 4 and Chapter 5 is an interpretation and analysis of the data.

Chapter 2 - Review of Literature

In 2000 NCATE mandated the assessment of dispositions in teacher education. Since that time, teacher education programs have been incorporating dispositions into their conceptual frameworks and developing systems to integrate the instruction and assessment of their selected dispositions. This chapter presents a review of literature of dispositions; particularly as identified in preservice teacher education programs.

This comprehensive review will commence with an exploration of the general concept of dispositions followed by dispositions in education. A review of Aristotle's *Nicomachean Ethics* and ecological and perceptual psychology will be used to build the philosophical background of the study. The second half of the review of literature identifies the INTASC and NCATE perspectives on dispositions, and summarizes the empirical evidence of the curriculum, instruction, and assessment of dispositions in teacher education.

Dispositions

General Definitions of Dispositions

In many cases, the definitions of dispositions found in education literature are general definitions. Therefore, before exploring dispositions specific to teacher education, a general definition drawn from the social sciences is reviewed.

In a pedestrian sense, most people know what a disposition is, but have a very tough time defining the term. A Google review of definitions provides standard dictionary definitions such as: prevailing tendency, mood, or inclination; temperamental makeup; the tendency of something to act in a certain manner under given circumstances (Merriam-Webster, November 3, 2010).

To further define the term, a brief, online search of psychological and sociological glossaries was conducted and a specific definition of the word was not found. The word disposition was cited only occasionally as part of the definition of other terms in psychology and sociology. In this context, it generally was used to indicate an internal motivation. For example, the website Allpsych.com does not include the individual word disposition in its glossary, but does have the phrase *dispositional attribute*. *Dispositional attribute* is defined as an attribute explained or interpreted as being caused by internal influences. (Allpsych.com)

Despite the fact the term disposition was not found in social science glossaries, the general term seems applicable to many theories and philosophies in the social sciences. However, a review of common social science theories and philosophies found occasional use of the word, but again, rarely was it defined. Two such definitions are presented here.

The first example is that of Damon (2007). As editor of *The Handbook of Child Psychology*, a comprehensive review of theory and research in human development, he seems to approach a scientific definition of disposition:

[A] disposition is a trait or characteristic that is embedded in temperament and disposes a person toward certain choices and experiences that can shape his or her future. It is a deep-seated component of personality, with roots going back to the origins of our temperaments and with tentacles that bear major import for who we are and who we shall become. (p. 367)

Bourdieu, the French sociologist who coined the terms cultural, social and symbolic capital, provides the second definition. Dispositions are described as part of his concept of habitus, a system of “durable and transposable dispositions” (Bourdieu, 1990, p.53). These dispositions, in turn, are lasting, acquired schemes of perception, thought and action that are

developed in response to determining structures (class, family, education) and external conditions. They are neither wholly voluntary nor wholly involuntary (Bourdieu, 1977; Skeggs, 2004).

In addition to the standard dictionary definitions and the definitions found in the social sciences, other general definitions can be found. In fact, many definitions found in the literature in the field of education are not specific to education, but, instead, are general definitions. Therefore, a sampling of these general definitions as used in education is presented in this section of the literature review. Definitions specific to the field of education will be presented later in the review. Villegas (2007) summarizes eight education studies and proposes the following general definition:

... dispositions are tendencies for individuals to act in a particular manner under particular circumstances, based on their beliefs. A tendency implies a pattern of behavior that is predictive of future actions... [and the] focus [is] on ... actions rather than ... attributes. (p. 373)

Other researchers have proposed a number of synonyms of the word disposition. Taylor and Wasicsko (2000) offer the following definition riddled with synonyms “personal qualities or characteristics that are possessed by individuals including attitudes, beliefs, interests, appreciations, values and modes of adjustment” (p. 2). Other common words or phrases that show up in the literature are “habits of mind” (Costa & Kallick, 2000; Thornton, 2006) and “perceptions” (Combs & Snygg, 1959; Combs, 1965; Singh & Stoloff, 2008; Taylor & Wasicsko, 2000; Wasicsko, 1977; Wasicsko, 2007).

A synthesis of these various, general definitions suggests dispositions are lasting, deeply-embedded qualities, characteristics, and personality traits manifested in choices and displayed as

actions. Dispositions are a tendency to behave in a particular manner and are predictive of future action.

Static Versus Dynamic Nature of Dispositions

Researchers tend to fall into one of two camps: those who think of dispositions as static and those who think of them as dynamic. The camp that supports dispositions as static or fixed links dispositions to broad, stable personality traits (Kyllonen, Walters, & Kaufman, 2005). Goldberg (1992) identifies what is referred to as the “Big Five” personality traits. These five traits— extroversion, neuroticism (emotional stability), agreeableness, conscientiousness, and openness— are supported by research that demonstrates their consistency across cultural and language boundaries (McCrae, Costa, Del Pilar, Rolland, & Parker, 1998) thus suggesting a common set of personality factors in most humans. The “Big Five” have been determined sufficiently stable that a number of personality tests and vocational tests have been built around them.

While there is some support that dispositions are static, the general consensus seems to suggest that they are neither permanent nor easily changed, but, rather, are slowly developed as perceptions of existing dispositions are challenged by environmental and situational stimuli.

Dispositions seem to have a cyclical nature of development. As suggested in the preceding definitions, dispositions are exhibited as perceptions, thoughts, and actions in response to situations. The exhibited perceptions, thoughts, and actions are based on previous responses to similar situations. The outcome of the current situation will influence future responses and as behaviors change, outcomes change and future behaviors change. Thus, dispositions are both predictive of future action and reflective of past response to action. Diez (2007) refers to this as the incremental approach based on constructivist, developmental and moral perspectives

suggesting that, although, development is not equal for all, nor at the same pace for all, it does occur and occurs best with positive interaction with the environment.

Moral Dimension of Dispositions

Also critical to this study is the relationship of dispositions to moral/ethical development. One element of this study is the comparison of graduates' self-reported dispositions from religious and non-religious affiliated institutions. The assumption is made that a moral dimension is present at the religious affiliated institutions. This is not to suggest that it is absent from the non-religious affiliated institutions, but that there may be a greater emphasis at the religious affiliated institutions.

As suggested in the previous section, dispositions slowly develop over time with exposure to various situations. Aristotle (1966), in his *Nicomachean Ethics*, echoes this idea of development when he suggests that the virtuous person makes right behavior a habit and this habit is trainable:

Moral virtue comes about as a result of habit. . . . Neither by nature, then, nor contrary to nature do the virtues arise in us; rather we are adapted by nature to receive them, and are made perfect by habit. . . . The virtues we get by first exercising them, as also happens in the case of the arts. . . . Men become builders by building and lyre players by playing the lyre; so too we become just by doing just acts, temperate by doing temperate acts, brave by doing brave acts. (book 2, chap. 1, p. 28-29)

Similarly, then, dispositions and virtues are developed in a cyclical nature through practice and engagement. Take the moral disposition of patience as an example. As one practices patience in a trying situation with success, she or he is better able to exhibit more

patience in similarly trying situations. With each more trying situation, the subject is better able to exhibit patience. Practice makes patient.

Rossano (2008), echoing Aristotle, also suggests practice is required to develop morally. In a review of pertinent literature, Rossano (2008) concludes that most religions promote similar “morally relevant character traits” (p. 174) that could be considered dispositions. These traits or dispositions tend to be universally supported via “deliberate practice” (p. 178) and “conscious deliberation” (p.178). Examples of these traits include “self-control, spirituality and wisdom” (p. 173).

Peterson and Seligman (2004), also exploring moral development, provide a framework for analysis by identifying what they call the “High Six” moral virtues. After extensive cross-cultural and historical analyses, six traits were identified as universally and historically admired as virtuous: wisdom, courage, humanity, justice, temperance, and transcendence (pp. 179-180). These moral virtues are listed below along with a brief definition and the associated character strengths. The character strengths associated with each trait can easily be thought of as dispositions.

1. Wisdom: cognitive strengths that entail the acquisition and use of knowledge.

Character strengths of wisdom: creativity, curiosity, open-mindedness, love of learning, and perspective.

2. Courage: emotional strengths that involve the exercise of will to accomplish goals in the face of opposition. Character strengths of courage: bravery, persistence, integrity, and vitality.

3. Humanity: interpersonal strengths that involve tending and befriending others.

Character strengths of humanity: love, kindness, and social intelligence.

4. Justice: civic strengths that underlie healthy community life. Character strengths of justice: citizenship, fairness, and leadership.
5. Temperance: strengths that protect against excess. Character strengths of temperance: forgiveness, humility, prudence, and self-regulation.
6. Transcendence: strengths that forge connections to the larger universe and provide meaning. Character strengths of transcendence: appreciation of beauty and excellence, gratitude, hope, humor, and spirituality. (Peterson & Seligman, 2004, pp. 29–30)

Thus, moral development (Aristotle, 1966) and religious development (Peterson & Seligman, 2004; Rossano, 2008) are deeply connected to, if not dependent upon, dispositions. Additionally, Griel's (1977) research on religious conversions further supports this developmental notion by suggesting that previous dispositions strongly influence future decisions. Based on this literature, there appears to be a strong tie between dispositions, moral development, and religion.

According to the research noted above, a general definition of dispositions is a set of deeply embedded character traits manifest in choices and exhibited in actions. Dispositions are not static, but slowly develop in a cyclical manner in which expression of the disposition leads to further development of the disposition. Finally, specific dispositions are critical elements in the development of moral and ethical virtues.

Dispositions in Teacher Education

History

Before exploring the construct of dispositions in teacher education, the history of the term's use in education is presented. Freeman (2007), in a comprehensive review of the literature, identifies Arnstine in 1967 as the first to "extensively" (p. 7) use the concept of

dispositions in teacher education. However, this early work did not develop and it was not until the mid 1980's that dispositions started to take hold in the field. Freeman (2007) identifies Katz and Raths in 1985 as the first to identify dispositions as a goal of teacher education. Freeman (2003, 2007) continues his argument by suggesting that these initial uses of the construct did not converge until a document, *Minnesota's Vision for Teacher Education: Stronger Standards, New Partnerships* by the St. Paul: Task Force on Teacher Education, Minnesota Higher Education Coordinating Board and Minnesota Board of Teaching, 1986, re-emphasized Katz and Raths' definition and conceptualized it into four categories: "Dispositions Toward Self," "Dispositions Toward the Learner," "Dispositions Towards Teaching," and "Dispositions Toward the Professions" (p. 8). Freeman (2003, 2007) then makes the case that this document influenced Linda Darling-Hammond and her colleagues as they conducted a Rand study that included Minnesota's work. Darling-Hammond then went on to chair the group that developed "the INTASC standards that in 1992 enshrined dispositions in teacher education apparently with considerable permanence" (Freeman, 2003, p. 4). Freeman (2007) also identifies a personal conversation with Darling-Hammond in which she acknowledges the phrase dispositions was commonly accepted by the early 1990's.

Also during the middle to late 1980s, the National Board of Professional Teacher Standards (NBPTS) were developed. In response to *A Nation at Risk* (NCEE, 1983), the Carnegie Task Force for Teaching as a Profession (1986) issued the report *A Nation Prepared: Teachers for the 21st Century*. The primary recommendation in this report was the creation of the standards. In 1987, the National Board was founded and in 1989 the Board released *What Teachers Should Know And Be Able To Do*. This policy statement contained the five guiding

principles on which all subsequent National Board standards are based. As can be seen in the quote below, the triad of knowledge, skills and dispositions is present in this document.

The fundamental requirements for proficient teaching are relatively clear: a broad grounding in the liberal arts and sciences; knowledge of the subjects to be taught, of the skills to be developed, and of the curricular arrangements and materials that organize and embody that content; knowledge of general and subject-specific methods for teaching and for evaluating student learning; knowledge of students and human development; skills in effectively teaching students from racially, ethnically, and socioeconomically diverse backgrounds; and the skills, capacities and dispositions to employ such knowledge wisely in the interest of students. (NBPTS, 2002, p. 2)

By the end of the 1990's, "knowledge, skills, and dispositions" were "firmly a part of the fabric of teacher education policy" (Diez, 2007, p. 389). Then, in 2000, NCATE solidified the triad "knowledge, skills, and dispositions" by including them in the new standards (NCATE, 2001).

Definitions Found in Teacher Education

Despite a long history of and an increased focus on dispositions in the last twenty years, there continues to be a sometimes contentious debate over their use in teacher education. This debate was the focus of the December, 2007 issue of the *Journal of Teacher Education*. The editorial in that issue highlighted the lack of consensus regarding dispositions by calling the debate "not so much quibbles over apples and oranges, but rather over apples and fishes" (Borko, Liston, & Whitcomb, 2007, p. 360) as a metaphor for how far apart the sides seem to be. In reality, the opposition appears to be not so much against implementing disposition evaluations for educators, but rather, believes equitable assessment is impossible without a clearly defined

construct (Damon, 2007; Murray, 2007). Other authors included in the same issue are highly supportive of the use of dispositions as tools to support social equality (Villegas, 2007), learning communities (Diez, 2007), and the moral aspects of the profession (Burant, Chubbuck, & Whipp, 2007).

Freeman (2007) suggests that the choice of the word “disposition” by NCATE, instead of words like “attitudes” or “beliefs” is wise for two reasons. First, he contends that the strength of the word lies in its ambiguity and inconsistency. As there was little formal use of the word in education, it spawned a critical debate of what constitutes an effective educator and how one is developed. The second benefit of selecting the word is its association with behavior or action, not just values or attitudes. Freeman links action-based dispositions to the performance based systems prominent in education today. As noted below, this general concept posited by Freeman is reflected in many of the educational definitions of dispositions found in the literature.

Wasicsko, Callahan, and Wirtz (2004) divide the various definitions into three general categories: teacher behaviors—writes well, is punctual, is tidy; teacher characteristics—tolerance of differences, open-minded, patient; and teacher perceptions—see students as able, people versus thing oriented. Thornton (2006) goes a step further and divides the various definitions of teacher dispositions into five categories or models: standards language—candidate behaviors usually presented as a checklist aligned to the standards; professional behaviors—attendance, humor, punctuality described as minimal expectations; self-reflections—surveys, personality tests and journals which may not reflect actual behavior in the classroom; ethics and equity—focus on diversity often a mismatch with personal experiences; and dispositions in action—patterns of thinking manifested in teacher action.

This idea of dispositions in action (Thornton, 2006)—patterns of thinking manifested in teacher action—is echoed by a number of other authors (Cudahy, Finnan, Jaruszewicz, & McCarty, 2002; Fallon & Ackley, 2003; Johnson & Reiman, 2007). Breese and Nawrocki-Chabin (2007) support the notion of dispositions in action by suggesting that dispositions are invisible and their analysis must rely on the actions of the teacher.

Johnson and Reiman (2007) and Oja and Reiman (2007) add an additional component to the above definitions noting that dispositions are a teacher's judgments and actions in ill-structured contexts which are defined as situations in which there is more than one solution.

Despite these various definitions, Honawar (2008) suggests a consensus is slowly starting to emerge. As Wasicsko (2007) suggests, we all know what dispositions are, but so far we cannot come up with an agreed upon definition. From this review, it seems the common components of the definition include somewhat nebulous words like: thoughts, attitudes, values, beliefs, traits, habits, etc. The other critical construct in the definition seems to be, as identified by Freeman (2007) at the beginning of this section, the associated actions. Many scholars believe we are still in the “mapping the field” phase, and that this construct will become more defined as more empirical data is gathered (Honawar, 2008; Murray, 2007; Thornton, 2006).

To date, the profession finds itself with an accrediting body, NCATE, demanding the assessment of dispositions. Yet, with the exception of two elements, fairness and the belief that all students can learn, there is no commonly defined construct, leaving teacher educators with few parameters for assessment. The result is a hodgepodge where each teacher education program identifies the dispositions and supporting theories it feels best represent its program and then attempt to create, with a varying degree of success, a system to introduce, teach and assess the selected dispositions.

The remaining portion of this literature review explores this variety of theories, methods of instruction, and assessments of dispositions. A few exemplary systems are also examined.

Philosophical Background

The broad social, emotional, developmental, and cognitive nature of dispositions suggests that any number of philosophies and theories from the social sciences can be used to describe them. Some possibilities include the affective domain (Krathwohl, Bloom, & Masia, 1964), *Nicomachean Ethics* (Aristotle, 1999), constructivism/developmental approaches (Piaget & Inhelder, 2000; Vygotsky, 1978), ecological psychology (Gibson, 1986; Heft, 2005), emotional intelligence (Goleman, 2006), perceptual psychology (Combs & Snygg, 1959), and social cognitive theory (Bandura, 1986;). Although various teacher education researchers (Breese & Nowrocki-Chabin, 2007; Oja & Reiman, 2007; Wasicsko, 2002) have adopted each of these theories and others as the conceptual framework for their disposition development systems, three particular theories have proven most useful in describing the philosophical background of this dissertation. Aristotle's *Nicomachean Ethics*, with analysis by Kemmis and Smith (2008), will be used to support the importance of dispositions in teacher education and the development of dispositions will be supported with ecological psychology and perceptual psychology.

Nicomachean Ethics

The triad of knowledge, skills, and dispositions will be explored through a review of Aristotle's virtues of thought found in the *Nicomachean Ethics*. Further analysis of *Nicomachean Ethics* specific to education is provided by Kemmis and Smith (2008). The following Greek words marked with italics are done so in the same spirit as Kemmis and Smith (2008); not just to identify a foreign word, but also to stress the ancient definition of the word.

The opening line of Aristotle's *Nicomachean Ethics* states, "Every craft and every line of inquiry, and likewise every action and decision, seems to seek some good..." (Aristotle, 1999, p. 1). Seeking the ultimate good in Aristotle's sense leads to a state of *eudemonia* or happiness; living well and acting well. An *eudaimon*, then, is one who lives well a life for self and for all. Kemmis and Smith (2008) interpret Aristotle by suggesting that an educator who seeks to be an *eudaimon* must act and live according to what is best for humankind as a whole, looking beyond self or even her or his students. Described next are three of Aristotle's virtues of thought (theoretical, technical, and practical) and their corresponding dispositions.

The first virtue of thought is theoretical, supported by the disposition *episteme*. *Episteme* is the disposition to seek truth for its own sake (Aristotle, 2004). In educational terms, Kemmis and Smith (2008) equate this disposition to that of studying various philosophies of education or pondering the "consequences of different forms of pedagogy..." (Kemmis & Smith, 2008, p.16). Another of Aristotle's virtue of thought is technical. Technical reasoning is supported by the disposition of *techne*. This disposition is to produce in a truly reasoned way (Aristotle, 2004). For a teacher this might include applying research-based teaching techniques to a classroom. Practical reasoning is a third virtue identified by Aristotle. It is supported by the disposition of *phronesis* or the moral disposition to "deliberate rightly" (Aristotle, 2004, p. 150). Kemmis and Smith (2008) suggest that this action is larger than doing what is socially appropriate, but doing what is right for humankind.

Kemmis and Smith (2008) contend that Aristotle's three dispositions, *episteme*, *techne*, and *phronesis*, are tightly linked and define an educator as a teacher who engages in all three virtues. In fact, there seems to be a synergy developed when these three virtues are taken as a whole. One could study aspects of education such as philosophies or even classroom

management techniques without ever stepping into the classroom and be versed in *episteme*. If one only has *techne*, they are but a teacher versed in the craft. This might represent an effective teacher, but one who has not kept up with the most current trends and relies on out-dated methodology. Similarly, the master potter or stone mason, wise in all aspects of her craft is said to have fulfilled the disposition of *techne*. An educator must be versed in the science of education and know the craft of teaching. Then, with this background, she or he will be able to engage in *praxis*; the action associated with *phronesis*; moral, wise decision making.

Hierarchy of Dispositions

Each of these dispositions has merit on its own, but, there seems to be a hierarchy of these dispositions. At the lowest level are *episteme* and *techne*. These two dispositions can be fulfilled independent of any other dispositions. The next level in the hierarchy of dispositions is that of *phronesis*. *Phronesis*, and particularly the action of *praxis*, is dependent on *episteme* and *techne*. *Praxis* is the act of moral and ethical decision making in a pragmatic sense. However, if an educator is to engage in *praxis*, the moral and ethical decisions must be based on some sort of schema. This schema comes from *episteme* and *techne*. In short, the ethical and moral decisions of an educator must be founded on the science and the craft.

In addition to Aristotle's three dispositions mentioned above, Kemmis and Smith (2008) identify a fourth, the critical disposition. This disposition is based on the work of German philosopher Habermas. Grounded in a pragmatic approach to critical theory (Habermas, 1971, 1989), this disposition requires one to critically re-evaluate that which is considered right. The critical disposition is said to be gained when the educator engages in actions that seek to overcome injustices, irrationality, and suffering (Kemmis & Smith, 2008). Consequently, this critical disposition could be interpreted as the highest level of the hierarchy. Only after having

attained the previous three dispositions, *episteme*, *techne*, and *phronesis*, is one able to critically evaluate a situation. Similarly, this critical re-evaluation or reflection dovetails nicely with the idea of cyclical development of dispositions presented earlier in the chapter.

Therefore, within Aristotle's dispositions *episteme*, *techne*, and *phronesis* can be found the triad of knowledge, skills, and dispositions as purported by NCATE. Furthermore, within this triad there is a hierarchy. Wilkerson and Lang (2007) openly describe the triad of knowledge, skills and dispositions as a hierarchy with teacher dispositions at the highest level. They comment that a teacher may have the knowledge and skills, but it is the dispositions that ensure a teacher uses them to benefit the students.

Building on the concept of the hierarchy, an additional hierarchy can be found within dispositions. Some researchers (Thornton, 2006; Wasicsko, 2007) have categorized various teacher dispositions and these categories can be interpreted at various levels. Wasicsko (2007) suggests that certain dispositions are easier to change or learn. For example, teacher dispositions related to professionalism (punctuality, professional dress, etc.) are easier to change than more personal dispositions such as humor, enthusiasm, optimism, or patience. However, the more-difficult-to-change, personal dispositions seem to be the more critical to the effective teacher and, therefore, can be considered at a higher level in the hierarchy than the easier-to change dispositions. For example, a pessimistic but professionally dressed teacher is probably less effective than an optimistic teacher who dresses casually. The dispositions of pessimism and optimism can be considered at a higher level than professional dress.

Similarly, Thornton (2006) seems to support the concept of a hierarchy of dispositions by placing critical dispositions on continua. The continua range from a "responsive to a technical orientation toward interacting with students" (Thornton, 2006. p. 6). For Thornton (2006), a

teacher with a responsive orientation is more effective than one with a technical orientation. The dispositions considered responsive (more effective) are at a higher level in the hierarchy. For example, she identifies a continuum of instructional dispositions ranging from creative to repetitive, with creative as the responsive orientation; the higher level. Another example is a continuum of classroom management dispositions ranging from empowering to controlling; empowering as the higher level.

In summary, there exists a double hierarchy of teacher dispositions. Those who achieve the highest level in either hierarchy are identified as the most effective teachers. First, within the triad of knowledge, skills, and dispositions, dispositions can be thought of as the highest level. As stated by Wilkerson and Lang (2007) and suggested by others (Aristotle, 2004; Habermas, 1971; Kemmis & Smith, 2008) a teacher may have the knowledge and skills to be an effective educator, but it is his/her dispositions that will determine if and how the knowledge and skills are employed. The second hierarchy of teacher dispositions is found within the dispositions. Teachers with certain dispositions tend to be more effective than others. These dispositions are the ones that can be considered at a higher level in the hierarchy. However, the more critical dispositions also seem to be the ones that are harder to develop in teachers.

This view of the importance of dispositions is not limited to these few researchers. The National Board for Professional Teacher Standards (NBPTS), in the report *What Teachers Should Know and Be Able To Do* (2002), identifies “the fundamental requirements for proficient teaching are ...the skills, capacities and dispositions to employ such knowledge wisely in the interest of students” (p. 2). INTASC and NCATE have also identified the importance of dispositions in teacher education. The standards relating to dispositions of these two organizations will be explored later in this chapter.

Theories Supporting the Development of Dispositions

Having established the importance of dispositions in teacher education and the hierarchy of dispositions, attention is now directed towards theories that support development of dispositions in teacher education. Educational researchers (Artzt & Curcio, 2003; Diez, 2007; Johnson, 2004; Keiser, 2005; Pottinger, 2009; Taylor & Wasicsko, 2000; Wasicsko, 1977) have suggested cognitive development theory, cognitive dissonance theory, the theory of perceptual psychology and social learning theory as the keys to the development of dispositions. Other learning theories appear in the literature, but to a lesser extent. Two such examples are Noddings' Theory of Caring (Bergman, 2004) and critical theory (Schussler, Bercaw, & Stooksberry, 2008). As teacher education programs grapple with dispositions and disposition assessment systems a wide range of approaches are incorporated and consequently a wide range of supporting theories are employed. In each case there is some merit to the selected theory. For example, with cognitive development—students learn dispositions in college and apply them while student teaching; with cognitive dissonance theory—dispositions grow when humans are placed in an uncomfortable setting; with perceptual psychology—all behaviors (actions) grow out of deeply held dispositions; and with social learning theory—dispositions are developed through interactions with peers, cooperating teachers, and professors. It is apparent that as teacher education programs develop their conceptual frameworks a wide range of theories have been applied to disposition development. Any number of these theories would be appropriate for this study. However, as perception is a critical component of this study, perception theories are explored here. But before exploring the theories, the teaching-learning process is reviewed.

Teaching-Learning Process

Teachers profess to teach many things and claim their students learn many things as a result of this teaching. However, the simple act of teaching does not guarantee that learning occurred. Learning is an individualized act, limited only to the learner. Therefore it is the learner's perception that s/he learned that is critical in the teaching-learning process.

This can be more fully explored in an example. In a mathematics class, the teacher presents a concept and assigns a series of assignments to measure the students' achievement. Student A scores well on the assignments, is able to apply the concept, and also feels confident with the concept. By traditional measures this student has learned the concept and, furthermore, Student A perceives s/he has learned the concept.

Student B struggles to gain the concept. After repeated attempts this student continues to be confused and does not score well on the assignments. This student has not learned the concept and Student B perceives s/he has not learned the concept.

Finally, Student C, maybe with a math anxiety, scores well on the assignments, but still feels some confusion about the concept. Has this student learned the material? Based solely on the scores on the assignments it appears the student has learned. However, if Student C perceives that s/he has not learned the concept, then, this student has not learned because s/he perceives that s/he hasn't learned.

In the description of Student C above, the critical variable to learning is the student's perception. Similarly, perception is a critical component of this study. Therefore, the supporting theories that are reviewed focus on perception in the learning process and in the development of dispositions.

Theories of Perception

The following theories focus on perception as an element in the learning process as well as a critical component in the development of dispositions. As mentioned previously, dispositions are deeply imbedded traits that simultaneously are determined by past experiences and predict future action. In this context, there seems to be cyclical nature in the development of individual dispositions and perception seems to play a critical role in that development. This view of dispositions is reflected in ecological psychology and the theory of perceiving-acting cycle. Before exploring ecological psychology and the perceiving-acting cycle a review of the traditional teaching-learning model is needed.

Traditional instruction was based on a sage teacher transmitting his knowledge to the learners (Jonassen & Land, 2000). This model was based on the traditional communication model which included a sender transmitting a message via some medium to the receiver. The receiver would hopefully return some sort of feedback to the sender completing the cycle. The classic image in education is that of the professor lecturing to a class of students. The traditional theory suggests that if the new knowledge is clearly sent, the information will be learned. With the advent of behavioral psychology, a new element was added to this traditional communication cycle; an element of practice. The goal now was a change in behavior. True learning could be determined via the completion of a behavioral objective. The discovery of new learning theories (constructivism, cognitive dissonance, social learning, etc.) has shifted the paradigm of how learning occurs from transmissive/submissive to “willful, intentional, active, conscious, constructive” (Jonassen & Land, 2000, p. v.). Jonassen and Land (2000) further suggest that learning is a three step cycle including intention, action and reflection with action being the result of perception and conscious thinking. They (ibid.) identify three fundamental tenets in

thinking about learning: 1) learning is the process of making meaning through resolving the dissonance of what we already know and what we perceive, 2) learning is social, and 3) knowledge rests not only in the individual, but in the collective culture. These three shifts are the basis of learning in ecological psychology.

Ecological psychology, originally espoused by Gibson (1986), is a matter of perceiving the environment. In the arena of learning, ecological psychology purports that the learner, material, and learning environment cannot be separated (Young, Barab, & Garrett, 2000). In this context, learners are thought of as detectors that can be “tuned” to specific knowledge that exists all around (ibid, p. 149). Consequently, the learner’s perception of the environment is critical in any learning situation.

A critical element in explaining learning in ecological psychology is the concept of the perceiving-acting cycle (Young, et. al, 2000). The basis of this cycle is that individuals detect or perceive information and, consequently, act on that information thereby transforming their environment, creating a new relationship to perceive and act upon. This model can be used as a tool to describe the development of dispositions.

As mentioned at the beginning of this chapter, the general consensus found in the literature seems to suggest that dispositions are neither permanent nor easily changed, but, rather, are slowly developed as perceptions of existing dispositions are challenged by environmental and situational stimuli. Although educational researchers who study dispositions such as Diez and Freeman don’t mention ecological psychology or the perceiving-acting cycle, this model seems to most closely represent their descriptions of the development of dispositions.

Another approach to reviewing perceptions is through the theory of perceptual psychology. Combs and Snygg (1959) posit that all behavior is “reasonable and necessary at the

time we are doing it” (p. 17). All behavior, then, is based on an individual’s perception of self and his/her world. In this context, reality is the perception of the individual’s world. Hamachek (1987) summarizes perceptual psychology stating, “reality lies not in the event, but in the phenomenon, which is to say, in our perception of the event.” (p. 68). “[W]e behave in terms of what we believe to be true, which is, of course, determined by our particular interpretation of the facts.” (p. 69) “Our personal world is perceptually organized in ways that are dictated not only by our central nervous system physiology, but also in accordance with the beliefs, needs, values, stereotypes, and self-concepts that each of us brings to our perception of ‘reality’.” (p. 70)

Combs (1965) used perceptual psychology as a tool to predict behaviors of teachers. Wasicsko, a student of Combs, has done extensive work on this initial research and describes this approach as “read[ing] behavior backwards” (Wasicsko, 1977, p. 3). In other words, by looking at ones behaviors, we can see their perceptions/dispositions and therefore predict their future behavior. Wasicsko (1977) reviewed more than ten-years’ of Comb’s work on perception to assist in developing an assessment tool of teacher dispositions. That is, one’s behaviors are always influenced by how they perceive the world around them. Thus, behaviors are a reflection of thoughts, attitudes, and emotions.

Richards (2003), also based on Combs’ theory, created the following definition: “The behavior of each and every human being is a function of interpretations, perceptions, and/or meanings experienced by him or her *at the moment of action, inaction or expression*” (emphasis in original, p. 5). She also cites the following example by Blevens to help in understanding the importance of perception in determining behavior.

If I believed that there is an assassin in this room who has been waiting for the appropriate moment (which I hope isn’t now) to unload his or her gun on me, I wouldn’t

be standing here talking to you about psychological theory. Believing I was at risk I would probably be doing what I could to minimize my risk.

Now suppose there actually is an assassin in this audience but I am completely unaware of this. I experience no risk, so I keep on talking. Even if everyone else in the room suddenly became aware that I was at risk, but I myself was oblivious to the risk, unless someone did something which enabled me to change my frame of reference, I would undoubtedly continue with my presentation and experience no necessity for taking any protective or preventive action. (pp. 4-5)

Ecological psychology, including the perceiving-acting cycle, and perceptual psychology are two theories supporting the importance of perception in the learning process and in this case the development of dispositions. Based on ecological psychology, learning is dependent on the three way relationship of the learner, the content, and the environment in which it takes place. In short, one's perception is a key determinant of learning. Knowledge is present, but the learning of that knowledge is dependent on the learner's perceptions. For example, a student who holds a grudge against a teacher and is completely capable of learning the material may not be successful due to his/her perception of the situation. Another component of ecological psychology is the process of resolving dissonance in thoughts or changing perceptions. In this case learning occurs when an existing perception is challenged and new data is gained to resolve the dissonance.

The resolution of this dissonance is the basis of the perceiving-acting cycle. An existing perception is challenged leading to a new behavior or action. The result of this action then allows for a new perception. This cycle is reflective of the process of developing dispositions.

The theory of perceptual psychology expands on the premises of ecological psychology. Where ecological psychology explains perception as a tool for learning, perceptual psychology

adds to that notion by suggesting that one's sense of reality is one's perception. In essence, perception is not only a tool for learning, it is learning; it is reality. From this notion, then, dispositions are not just developed, they are the basis of past, present and future action. For example, a college student exhibits the disposition of sloppy, unprofessional dress. Ecological psychology would suggest that the perception of sloppy dress is acceptable in a college classroom and therefore there is no dissonance and no reason to change the disposition. If however, the student is not permitted to attend a practicum experience due to the sloppy attire, most likely some action is going to happen as part of the perceiving-acting cycle. More professional dress is going to allow for more professional opportunities. Then, according to the theory of perceptual psychology, the reality is more opportunities are afforded to those who dress professionally. Or if the converse is true, the student may not see that dress has anything to do with a teacher's ability to teach and, therefore, will decide to still dress sloppily. In this case, the student's reality is that dress does not affect teaching ability.

Summary of Philosophical Background

In his *Nicomachean Ethics*, Aristotle defined his core virtues and dispositions. Kemmis and Smith (2008) interpret these dispositions for the teaching profession by placing them in a hierarchy. They also add a fourth disposition, based on the Habermas' Critical Theory, as the highest in the hierarchy. This hierarchy as described by Kemmis and Smith is echoed in the triad of knowledge, skills, and dispositions. Within the triad, dispositions are considered the most important (Wilkerson & Lang, 2007).

A second hierarchy exists within dispositions. The more personal, harder-to-change teacher dispositions such as optimism and humor seem to be more critical to effective teaching than dispositions related to professionalism such as promptness or professional dress (Wasicsko,

2007). Similarly, Thornton (2006) places teacher dispositions on continua ranging from responsive to technical. In her example, the responsive dispositions are higher on the hierarchy than the technical dispositions. Therefore, the importance, not just of dispositions, but of certain dispositions is established. Many theories and approaches have been implemented in attempting to develop dispositions in teacher candidates.

Two theories focused on in this literature review are ecological psychology and perceptual psychology. Both of these theories stress the importance of the individual's perception. Ecological psychology stresses the interconnectedness of the learning environment, the learner and the knowledge to be learned. Learning—changing behavior—occurs when a new action is completed in an attempt to rectify a perceived dissonance. The environment, consequently, is altered and a new perception occurs. Perceptual psychology is very similar, but adds a component that the perceived environment is *reality* for the participant. Therefore, all actions are the best at the given moment in the given circumstance. Due to the self-reported data to be collected in this study, these perceptual theories support this study.

Empirical Evidence

The final section of this review of literature is a review of pertinent reports and studies on the topic of dispositions in teacher education. National guidelines are presented followed by independent studies. The studies are grouped into three sections: the curriculum and instruction of dispositions, assessing dispositions, and comprehensive dispositions systems. The review ends with a discussion on the gap in the literature.

INTASC Guidelines on Dispositions

As a practical approach to developing dispositions, many teacher education programs have adopted the Interstate New Teacher Assessment and Support Consortium (INTASC)

standards. In 1987, the Council of Chief State School Officers (CCSSO) convened a task force of 17 state representatives and other representatives from professional organizations called INTASC. The goal of this task force was to develop a set of entry-level standards for the teaching profession (INTASC, 1992). This set of standards, published in 1992, provides knowledge, dispositions and skills grouped into ten guiding principles.

These original standards have recently undergone a revision and updating process. In July 2010, CCSSO published a draft version of the updated standards. The core of the new InTASC standards appear to be very similar to the original standards, with most changes focusing on technology, emphasizing the multicultural makeup of the classroom of 2010, and a reorganization of the standards. Since these new standards are still in a draft form, the older version is cited in this review.

Baldwin (2007) identifies the INTASC dispositions as “the most comprehensive list identified so far in a review of dispositions lists.... and represent the single most influential list of dispositions used by over 40 of the 50 states in the U.S.A. in teacher education” (p. 30). Countless teacher education programs have aligned their programs to the INTASC standards and, consequently, these standards play an important role in teacher education at this time. Due to their import role in teacher education programs, each principle, with its associated dispositions, is listed below.

Principle #1: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

DISPOSITIONS

a) The teacher realizes that subject matter knowledge is not a fixed body of facts but is complex and ever-evolving. S/he seeks to keep abreast of new ideas and understandings in the field. b) The teacher appreciates multiple perspectives and conveys to learners how knowledge is developed from the vantage point of the knower. c) The teacher has enthusiasm for the discipline(s) s/he teaches and sees connections to everyday life. d) The teacher is committed to continuous learning and engages in professional discourse about subject matter knowledge and children's learning of the discipline. (INTASC, 1992, p. 15)

Principle #2: The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.

DISPOSITIONS

a) 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. b) The teacher is disposed to use students' strengths as a basis for growth, and their errors as an opportunity for learning. (INTASC, 1992, p. 16)

Principle #3: The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

DISPOSITIONS

a) The teacher believes that all children can learn at high levels and persists in helping all children achieve success. b) 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." c) The teacher respects students as individuals with differing personal and family backgrounds and various skills, talents, and interests. d)

The teacher is sensitive to community and cultural norms. e) The teacher makes students feel valued for their potential as people, and helps them learn to value each other.

(INTASC, 1992, p. 19)

Principle #4: The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

DISPOSITIONS

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. (INTASC, 1992, p. 20)

Principle #5: The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

DISPOSITIONS

a) The teacher takes responsibility for establishing a positive climate in the classroom and participates in maintaining such a climate in the school as whole. b) The teacher understands how participation supports commitment, and is committed to the expression and use of democratic values in the classroom. c) 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. d) The teacher recognizes the value of intrinsic motivation to students' life-long growth and learning. e) 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.

(INTASC, 1992, p. 23)

Principle #6: The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

DISPOSITIONS

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 seek 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. (INTASC, 1992, p. 25)

Principle #7: The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

DISPOSITIONS

a) The teacher values both long term and short term planning. b) The teacher believes that plans must always be open to adjustment and revision based on student needs and changing circumstances. c) The teacher values planning as a collegial activity. (INTASC, 1992, p. 27)

Principle #8: The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.

DISPOSITIONS

a) 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. b) The teacher is committed to using assessment to identify student strengths and promote student growth rather than to deny students access to learning opportunities. (INTASC, 1992, p. 29)

Principle #9: The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

DISPOSITIONS

a) The teacher values critical thinking and self-directed learning as habits of mind. b) The teacher is committed to reflection, assessment, and learning as an ongoing process. c) The teacher is willing to give and receive help. d) The teacher is committed to seeking out, developing, and continually refining practices that address the individual needs of students. e) The teacher recognizes his/her professional responsibility for engaging in and supporting appropriate professional practices for self and colleagues. (INTASC, 1992, p. 31)

Principle #10: The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

DISPOSITIONS

a) The teacher values and appreciates the importance of all aspects of a child's experience. b) The teacher is concerned about all aspects of a child's wellbeing (cognitive, emotional, social, and physical), and is alert to signs of difficulties. c) The teacher is willing to consult with other adults regarding the education and well-being of his/her students. d) The teacher respects the privacy of students and confidentiality of

information. e) The teacher is willing to work with other professionals to improve the overall learning environment for students. (INTASC, 1992, p. 33)

NCATE Guidelines for Dispositions

The National Council for Accreditation of Teacher Education (NCATE) has been accrediting teacher education programs since 1954. They are one of two accrediting bodies recognized by the United States Department of Education (USDE, 2011). As of 2011 are currently 657 institutions accredited by NCATE with almost another 100 seeking accreditation (Wise, 2011). NCATE has partnered with 46 states plus the District of Columbia and Puerto Rico. In 17 of these states all teacher education programs are accredited with NCATE. Obviously, with many teacher education programs accredited by this body they have significant clout when creating policy.

In 2000, NCATE adopted a new set of standards. For NCATE this was the first time it included the language of the triad; knowledge, skills and dispositions. More specifically, the standards state “Candidates preparing to work in schools as teachers or other professional school personnel know and demonstrate the content, pedagogical, and professional knowledge, skills, and dispositions necessary to help all students learn.” (NCATE, 2001. p. 14) A footnote in the standards documents suggest units look to Codes of Ethics as guides for dispositions. The initial NCATE definition of dispositions was:

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. (NCATE, 2001, p. 53)

In the decade since this first definition was established, NCATE made a number of modifications, yet the core has remained the same. In 2006 NCATE came under some scrutiny for including the term “social justice” in its definition as some looked at it as indoctrinating values. The term consequently was removed from the definition.

The revised 2008 NCATE definition uses the term “professional dispositions” in place of disposition. The only two required dispositions that teacher education program must assess are those of fairness and a belief that all students can learn (NCATE, 2008).

Summary of national guidelines

Both the INTASC standards and NCATE have had a substantial impact on the implementation of dispositions in teacher education programs. The INTASC standards have proven to be the gold standard by which many, if not most, teacher education programs strive. NCATE does not clearly identify dispositions as INTASC does, but, as an accrediting body, has substantially more influence on ensuring that dispositions are incorporated into teacher education programs.

Curriculum and Instruction of Dispositions

While some hold to the concept of a static nature of dispositions, the general consensus in the literature is that dispositions can be taught. Breese and Nawrocki-Chabin (2007) and Johnson and Reiman (2007) confirm that appropriate teacher dispositions can be developed over time in a teacher education program. Wasicko’s (2007) review of much research confirms this statement, but, as mentioned earlier, he identifies a continuum of dispositions, some of which are easier to change than others. He suggests the professional dispositions such as knowledge,

punctuality, and appearance are easier to change than the more internal dispositions like enthusiasm, optimism, and humor.

A review of a number of studies identifies three reoccurring methods used by teacher education programs to teach dispositions: modeling, exposure to new situations, and self-reflection. The most commonly identified method was that of modeling (Baldwin, 2007; Breese & Nawrocki-Chabin, 2007; Campos, March & Jackson, 2009; Diez, 2007; Dottin, 2009; Pottinger, 2009; Power, 1999). Bandura's modeling theory, as a component of his social learning theory, supports modeling as a method for developing dispositions (Breese & Nawrocki-Chabin, 2007). The four components of the theory are: awareness of the modeled behavior, retention of the appropriate behavior, reproduction of the behavior, and motivation and reinforcement. These four steps can be applied both by faculty in the teacher education program (Baldwin, 2007) as well as by cooperating teachers during field experiences (Pottinger, 2009; Power, 1999). Building on the social learning theory, Diez (2007) and Dottin (2009) recommend professional learning communities as the way to build dispositions. Within the professional learning communities they suggest an environment where all members (candidates, professors, cooperating teachers, and others) work collaboratively to develop moral professionals. It is within this shared environment that acting professionals model the appropriate, moral dispositions and all are accountable to each other for development.

The second common method was exposure to new situations (Breese & Nawrocki-Chabin, 2007; Campos, March & Jackson, 2009; Schussler, Bercaw, & Stooksberry, 2008). More specifically, Schussler et al. (2008) identify "an inverse relationship between awareness and assumptions" (p. 48) that can be described as candidates making hasty judgments about students to whom they have not been exposed. Additionally, they caution that exposure in one class is

insufficient to produce substantial gains in awareness. In essence, repeated exposure to new situations that challenge a candidate's assumptions is needed to develop dispositions in candidates.

A third common method for teaching dispositions is that of self-reflection (Miller & Kelly, 2007; Misco, 2007; Schussler, Bercaw, & Stooksberry, 2008). Self-reflection can come in many forms; journaling, on-line discussions, essays and others. Regardless of the format, the process of critical self-evaluation appears to promote the development of dispositions.

In addition to the three general methods of teaching dispositions identified above, a number of specific methods have also been identified. Miller and Kelly (2007) identify a system of referral letters that are shared with candidates identifying specific strengths and weakness. Misco (2007) developed a four-part curriculum that includes global education, social justice, reflection, and civic education. Breese and Nawrocki-Chabin (2007), in addition to modeling and self-reflection, instruct candidates with a specific, scaffolded language used to analyze dispositions. Taylor and Wasicsko (2000), in a summary of trends of the use of dispositions, identified mandated human relations/disposition classes and teacher effectiveness training workshops as two additional methods of developing dispositions in teachers. As mentioned previously in this literature review, each teacher education program develops its own set of dispositions and consequently its own approach to teaching them. Consequently the methodology is widely varied.

A review of dissertations on the topic revealed only one dissertation specific to the curriculum, instruction and assessment of dispositions (Baldwin, 2007). This study reviewed the process and quality of delivery of dispositions in three teacher education programs. The results suggest that dispositions are present in most teacher education courses and that more than 70%

of respondents believe dispositions were directly taught in at least one course in their respective teacher education program. Syllabi from teacher education courses were reviewed in the study and the results identified a great variety of approaches. In some cases no dispositions were listed in the syllabi, while others listed multiple dispositions. Baldwin's study identified two-thirds of the faculty self-report either partially or fully teaching the identified dispositions. Preservice teacher candidates felt that 80% of the faculty taught to some extent the identified dispositions. The study indentified "infusion" into course work as the prominent method for teaching dispositions. All three teacher education programs in the study also used conferencing as another method of teaching dispositions.

In summary, the methods for teaching dispositions in teacher education programs are as varied as teacher education programs themselves. This variety most likely goes back to the fact that programs, for the most part, are free to identify the dispositions they feel most directly support the conceptual framework of the program. As mentioned before, it is a hodgepodge.

Assessment of Dispositions

As can be expected, with a variety of dispositions and a variety of instructional methods to teach those dispositions, the assessment of dispositions also takes many forms; checklists, observation records, portfolios, interviews, coursework assignments, journals and reflections, and letters of reference (Fallon & Ackley, 2003; Schussler, Bercaw, & Stooksberry, 2008; Taylor & Wasicsko, 2000; Wasicsko, Callahan, & Wirtz, 2004). Baldwin (2007), in a limited study of three teacher education programs, investigated the frequency of the assessment of dispositions and concluded that almost 90% of faculty and candidates indicated the two primary methods for assessing dispositions were reflection papers/journals and class discussions. This study also reported the least common assessment method was human relations incidents. The term "human

relations incident” was not defined in the survey tools and this could be the reason for the low response.

Salzman, Denner, and Harris (2002) noted that of those institutions that use attitude/self-efficacy surveys to assess dispositions, 86% developed their own instrument. The benefit of such surveys is the possible direct alignment with the espoused dispositions of the program. The downside, however, is a possible lack of validity and reliability of the assessment. The population of this survey was 370 institutions, a fairly large number so the results are probably generalizable.

Proper assessment requires more than just a set of instruments. Consequently, Diez (2007) offers five principles to guide the assessment of dispositions. First, the assessment tool must make the invisible visible. Second, the assessments should be both structured, such as class assignments and checklists, and on-going observation and interaction with the candidate. Fallon and Ackley (2003) reinforce this principle by suggesting multiple assessments. Diez’s third principle states that assessment should take place over time; part of an on-going reflective process. The fourth principle states that the assessment criteria should be public and explicit. Combining principles three and four establishes an assessment system where growth and development are promoted and a series of gateways are established. These gateways are encouraged by other researchers (Fallon & Ackley, 2003; Miller & Kelly, 2007) and a clear system of gateways with public, explicit criteria can protect a teacher education program from lawsuits (Wilkenson & Lang, 2007). The fifth principle is that the process of assessing dispositions carries with it a moral obligation not just to the candidate but also to the program. Diez (2007), Dottin (2009), and Villegas (2007) suggest dispositions are moral elements and teacher education programs have a duty to produce moral and ethical teachers. Furthermore,

Diez (2007) contends that teacher education programs should not be instructing and assessing dispositions simply to maintain accreditation, but rather, because it is the right thing to do.

One principle not raised by Diez is that of who should be doing the assessment of dispositions. Wasicsko, Callahan, and Wirtz (2004), in *Integrating Dispositions into the Conceptual Framework*, suggest multiple forms of assessments including: self-assessment, faculty assessment, and assessment by the cooperating teacher. Although not explicitly stated, Baldwin's (2007) research identifies dispositional assessments from multiple sources.

In summary, the literature includes a number of descriptive studies in which teacher education programs specify the details of their disposition curriculum, instruction, and assessments. Just as with the methods of instruction, there is a wide variety of assessment tools. Sprinkled amongst this literature are a few prescriptive pieces highlighting theories and exemplary works. Due to the NCATE mandates, it seems more common that teacher education programs have documents incorporating dispositions into the conceptual frameworks of the program and fairly well developed assessment systems are in place. However, there is still a sense that many teacher education programs do not have well-developed, comprehensive dispositions curriculum, instruction and assessment systems.

Comprehensive Disposition Systems

This final section of the literature review identifies some exemplary comprehensive systems. Five such systems are identified here. Johnson (2004) conducted a study of dispositions based on Deliberate Psychological and Professional Education (DPPE). In this study, candidates' dispositions are assessed through standardized assessment and descriptive measures. Then, a cycle of conferencing, demonstrating, and observing, using Cogan's approach to school supervision, mixed with a set of goals of adult cognition, is employed to develop specifically

agreed upon dispositions. The DPPE system uses a continuous growth model of development, but focuses on dispositions.

Schulte, Edick, Keiser, and Edwards (2002) describe a system based on the Teacher Disposition Index as an assessment instrument. Other components of their system include a Professional Dispositions Statement, completed at various checkpoints in the teacher education program; a Conference Record form, completed by advisors; a course alignment map that identifies when and where dispositions are taught; and finally, all data is compiled in a e-portfolio.

Freking and Paulson (2007) report how their disposition system is integrated into courses and identify specific assignments used by a teacher education program. In the introductory courses many of the assignments are geared to identifying and defining dispositions in the profession. As the candidate progresses through the program more specific dispositions are included, such as willingness to work with all students. The structure of many of the assessments is that of an essay or reflection. Much of it is written.

Wilkerson and Lang (2007) created the Dispositions Assessments Aligned with Teacher Standards (DAATS) system. The DAATS system is a five-step process that can be adopted by any teacher education program and used to develop its own system. As opposed to some of the other systems presented, the DAATS system is not prescriptive, but rather, outlines a process for integrating dispositions into a teacher education program. Step 1 is a process of analyzing the existing program to determine core dispositions. Steps 2 and 3 include discerning the assessment framework and designing specific assessments. The last two steps of the process involve the creation of a data management system and defining the information dissemination process.

Finally, Oja, and Reiman (2007) describe the Integrated Learning Framework (ILF). The ILF incorporates seven guiding principles that are similar to components of the previously

mentioned systems. The ILF is grounded in the theory of constructivist-development focusing on the works of Kohlberg, Piaget, and more recently, Sprinthall and Theis-Sprinthall.

In each of these five cases the disposition instruction and assessment system appears to work for the specific teacher education program for which it was designed. However, the DAATS system seems different in the sense that it is a process that can be used to develop a system—but the result still will be a system specific to the teacher education program for which it was designed. The overarching message is that there is no one approach to teaching and assessing dispositions.

This review suggests, however, that there are common elements in successful instruction and assessment systems. Dispositions should be incorporated throughout the program; in course work, as observation, in practica, and modeled by professors, cooperating teachers and peers. Assessments need to be presented in multiple formats and consistently delivered. Finally, the data should be analyzed and disseminated.

Summary

For the past ten or more years, teacher education programs have been struggling to implement curricular, instructional and assessment systems for dispositions as per the NCATE mandate. As the literature suggests, some have been more successful than others. The success seems to be on an individual, program-by-program case.

The lack of comprehensive success is most likely based on the fact that the profession as a whole has yet to standardize the construct dispositions. Consequently, as described in this review, each teacher education program focuses on its own core dispositions and its own instruction and assessment system. Much of the literature, therefore, is theoretical in nature with a few descriptive studies highlighting what could be considered exemplars.

One study (Baldwin, 2007), which explored the curriculum, instruction, and assessment of dispositions, is rather similar to this proposed study. The Baldwin study looked at three specific institutions and reviewed the methods and perceived quality of delivery and assessment of dispositions from the view of unit heads, professors, and preservice teacher candidates. Additionally, the study compared church affiliated to non-church affiliated institutions. The proposed study will widen the view from three institutions to all institutions in the state. Based on the thought that dispositions are developed via perception, candidate perception will be the source of data.

Table 1 *Summary of Empirical Research Studies*

Study	Subjects	Method of Study	Findings
Artzt & Curcio (2003)	Cohort of 33 who entered as freshmen with intentions to become math teachers.	Mixed Methods: <ul style="list-style-type: none"> • Qualitative <ul style="list-style-type: none"> ○ Journaling, ○ reflection of video of teaching ○ interview • Quantitative <ul style="list-style-type: none"> ○ Questionnaire ○ SAT ○ GPA ○ Math Beliefs Scales 	<ul style="list-style-type: none"> • Participants influenced by past experiences: Tend to want to teach the way they were taught, but through repeated exposure new approaches were used • Quiet college students tend to become “listening” teachers, giving their students more opportunities to engage in class • Student behavior patterns transfer to teaching: work ethic
Baldwin (2007)	3 administrators, 24 faculty and 431 students from 3 institutions: 2 private Christian, 1 large, public.	Mixed-methods: <ul style="list-style-type: none"> • Interviews • Questionnaires • Document analysis 	<ul style="list-style-type: none"> • 92% of professors agreed dispositions were taught by infusion in courses compared to 72% of students • More than 72% of all respondents agreed dispositions were taught in at least 1 course. • More formal teaching of dispositions occurs at the large university than at the small, private institutions • No formal training for faculty to teach dispositions.
Johnson (2004)	3 novice teacher/mentor pairs	Case study using the Deliberate Psychological and Professional Education (DPPE) program	<ul style="list-style-type: none"> • Matrices can be used as a tool to informally assess dispositions • Significant congruence was found between judgments and actions, both for mentors and novice teachers • Reconceptualization of dispositions to contain 5 components: sensitivity, judgment, motivation, action, reflection

Study	Subjects	Method of Study	Findings
Johnson & Reiman (2007)	Replication of Johnson (2004)	Case study using the Deliberate Psychological and Professional Education (DPPE) program	<ul style="list-style-type: none"> • Matrices can be used as a tool to informally assess dispositions • Significant congruence was found between judgments and actions, both for mentors and novice teachers • Reconceptualization of dispositions to contain 5 components: sensitivity, judgment, motivation, action, reflection
Keiser (2005)	79 student teacher/cooperating teacher pairs	Quantitative study using the Teacher Disposition Index (TDI) Statistical analysis <ul style="list-style-type: none"> • t-tests ANOVA 	<ul style="list-style-type: none"> • Student teachers rated themselves significantly higher than the cooperating teachers rated them. • The rating on the student-centered subset were higher than the professional/curriculum-centered subset
Lambert, Curran, Prigge, & Shorr (2005)	479 preservice teachers from a regional university enrolled in an introductory inclusion course. 207 were secondary/content specialists	Quantitative study <ul style="list-style-type: none"> • 21 Likert-type inclusion related items • Offered as a pre- and post- survey Statistical analysis <ul style="list-style-type: none"> • t-tests 	<ul style="list-style-type: none"> • A single course on inclusion can significantly impact the students' dispositions toward inclusion of special needs children into the general education classroom • Preservice elementary teachers are more positive about inclusion • Preservice secondary teachers showed more gains
Pottinger (2009)	280 student teacher/cooperating teacher pairs	Mixed method Quantitative <ul style="list-style-type: none"> • TDI Qualitative <ul style="list-style-type: none"> • 10 open ended questions 	<ul style="list-style-type: none"> • Student teachers rated their cooperating teachers significantly lower than the coops rated themselves on both subsets • There is dissonance in the self-reported dispositions of cooperating teachers compared to the observations made by the student teachers.
Richardson & Onwuegbuzie (2003)	147 graduate and undergraduate students <ul style="list-style-type: none"> • To test pilot study • 82% no teaching experience 	Quantitative <ul style="list-style-type: none"> • Survey of Dispositions of Inservice and Preservice Teachers • 5-point Likert-type scale Statistical analysis <ul style="list-style-type: none"> • t-tests 	<ul style="list-style-type: none"> • No significant difference between year of experience and "level of disposition" • No difference in age • No difference between preservice and inservice teachers
Schussler, Bercaw, & Stooksberry (2008)	30 teacher candidates <ul style="list-style-type: none"> • All Caucasian • ½ from a midsized private college in the Northeast • ½ from a midsized public institution in the Southeast 	Qualitative <ul style="list-style-type: none"> • Pre-, post-written responses to a case study • In class discussion on related topics over the course of the semester 	<ul style="list-style-type: none"> • There is an inverse relationship between awareness and assumptions • Teacher education programs address less tangible items less often; content and pedagogy over dispositions • Reflection can be a key to growth • Exposure in one class is insufficient
Thornton (2006)	<ul style="list-style-type: none"> • 16 urban middle-level teachers and 120 urban middle-level students 	Qualitative Interviews with teachers, observers, students	<ul style="list-style-type: none"> • The dispositions of the teacher was the determining factor in success of the students (according to the students) • Refined definitions of dispositions: Dispositions in action—specific qualities are identified and placed on a continuum

Chapter 3 - Methodology

The purpose of this study is to identify which and to what extent dispositions were self-reported by novice teachers and the extent to which novice teachers perceive they were taught the dispositions in their teacher education program. Additionally, it identifies differences in exhibited dispositions of novice teachers from different types of schools: large, public universities or small, private colleges and universities. This chapter discusses the methodology of the study in the following sections: 1) research question, 2) research design, 3) data collection, and 4) data analysis.

Research questions

Three research questions were used to explore this topic.

- 1) To what extent do novice teachers self-report that they exhibit positive teacher dispositions?
- 2) To what extent do novice teachers perceive they were taught these same dispositions?
- 3) Do graduates of small, private, church affiliated Institutions of Higher Education (IHEs) display the assessed dispositions at the same rate as graduates of large, public, secular universities?

Research Design

Type of study.

This study is descriptive in nature using a quantitative approach. A frequency distribution was used to explore dispositions. Additional analysis compared various groups of novice teachers' self-reported dispositions as per the study questions listed above.

Context and access to study.

In light of the lack of standardization of teaching and assessing of dispositions, this study takes a comprehensive look at how one state's teacher education programs address these topics. As a state-wide study, this Midwest state was selected as access was available to the database of novice teachers.

Population.

The population for this study was novice teachers in a Midwestern state's public schools in 2010-2011 who graduated from NCATE-accredited institutions offering initial teacher education programs in the same state. Novice teachers are defined as teachers in their first year of teaching. These teachers were selected due to their recency of graduation and corresponding assumed likeliness of reflecting the disposition espoused by the institution from which they graduated.

Sample Size and Procedures.

According to the 10-11 State Licensed Personnel Report (KSDE, 2011a), there were 1,185 first year teachers teaching who fit the criteria described in this study. Subjects were identified via the State Department of Education (KSDE) database of graduates and the KSDE Licensed Personnel Report (K. Gosa, personal communication, January 7, 2011).

The data set requested from the state department of education listed some 1,400 teachers who fit the desired criteria. However, analysis of the data identified a number of teachers listed multiple times due to teaching various subjects. For example, due to differences in reporting methods in various school districts, a teacher who taught Spanish I, Spanish II, and Spanish III may have been listed three times. All duplicate names were removed from the list. Seven hundred eighty-one novice teachers made up the population.

A search was conducted to find the email address of the 781 potential participants. Email addresses were acquired through district online directories, searching individual school websites, and a state-wide directory of school districts. In cases where the email address could not be identified via the means identified above, a likely email address of a participant was generated based on the district-wide pattern such as “last name first initial @usd###.com”.

Of the 781 emails sent out, 138 emails bounced back to the sender as invalid address or some other error. All 138 were investigated in an attempt to identify a “good” email. In five cases a different email address was identified that resulted in a completed survey. In all, 648 emails appear to be “good.”

Of the 648 requests that novice teachers received, 305 resulted in submitted surveys. This equates to a 47.1% return rate. The Axio software program used to administer the survey identified 38 surveys as “not finished”. A review of these 38 surveys showed respondents entered the demographic data, but none of the other survey questions had been completed.

The software package also considers a survey “complete” when a respondent clicks the “submit” button regardless of which questions are answered. Nine submitted surveys were marked as complete, but in reality were incomplete. These nine incomplete surveys and the 38 “not finished” surveys were eliminated. In all, 258 usable surveys were collected out of the 648 sent to the first-year teachers. The response rate of usable data is 39.8%.

After gathering potential names of the eligible population and securing IRB approval, an email seeking participation in the study was sent directing the respondents to an electronic version of the survey (see Appendix C). To ensure anonymity, each participant was given a unique code that was used to determine participation. For those not initially responding, two follow up emails were sent with letters of introduction and a link to the survey. The protocol of

three contacts with potential respondents, procedures to ensure anonymity, and formatting of the letter of transmittal were suggested by Fowler (1993) and Krathwohl (1998).

Instrumentation.

The Teacher Disposition Index (TDI) was the selected survey tool for this investigation. The TDI is a 45 item, Likert-type survey originally developed at the University of Nebraska, Omaha. The TDI is aligned with dispositions associated with the INTASC standards (Appendix A). Email correspondence highlighting permission to the use TDI can be found in Appendix B.

There are a number of reasons the TDI was selected. First, the TDI is aligned to the INTASC standards. Because this states' professional education standards are based on the INTASC standards (KSDE, 2009), an assumption is made that most teacher education programs' dispositions are in some way aligned to these standards. Second, the TDI is a quantitative instrument, unlike a number of other available instruments. As mentioned in Chapter 2, much of the confusion around the construct of dispositions is its qualitative nature. Adding quantitative data, which seems to be more widely accepted, may help clarify the debate over dispositions.

Finally, in a review of the literature, the TDI appears to be the only instrument that has been determined to be reliable and valid in assessing teacher candidate dispositions (Schulte, Edick, Edwards, & Mackiel, 2004). Item development for the TDI was done by a group of 12 doctoral students who had a mean of 15 years of experience in the field of education. Content validity was determined by a group of 13 reviewers, none of whom were in the group that determined item development, who rated each item on a three point scale. Items receiving a low rating were reworded or eliminated. The content validity group had a mean of 22.5 years of experience in the field of education.

To further validate the TDI and to provide an estimation of reliability, the list of items was presented to 105 undergraduate students who responded to each item using a scale ranging from strongly disagree (1) to strongly agree (5). Data were analyzed using factor analysis, coefficient alpha, frequency distributions, correlation analyses, and independent t-tests. The reliability estimate for the student-centered subset was .98 and the reliability estimate for the professional/curriculum-centered subset was .97 (Schulte, Edick, Edwards, & Mackiel, 2004).

Schulte, et al. (2004) determined the TDI to have content validity related to the INTASC principles. No statically significant differences were identified between age groups, gender, or certification levels of respondents. Consequently, the TDI has been used as the principle instrument for at least three other studies (Keiser, 2005; Pottinger, 2009; Turkmen, 2009) or adapted for use by IHEs (University of North Texas, 2011; Wayne State College, 2011).

Two additional sections were added to the TDI. A demographics section was added to facilitate processing the data, particularly for the secondary. Following is a list of demographic questions to include with the TDI.

- 1) name of institution from which graduated.
- 2) gender—male or female
- 3) age—25 and younger (traditional age) or 26 and older (non-traditional age)

Respondents were also asked to identify the institution of higher education (IHE) from which they graduated. The researcher coded the IHE as either small, private, institutions or large, public institutions.

The second section that was be added to the TDI was a Yes/No response item associated to each of the 45 items on the TDI. The respondents, in addition to rating their exhibiting of

each disposition indicator, answered YES or NO if they felt their teacher education program taught them that indicator.

The 45 dispositions on the TDI are further subdivided into two subsets; 25 student-centered dispositions and 20 professional/curriculum-centered dispositions. The subsets were created by the TDI authors through factor analysis. The data were analyzed following these two subsets as it provided small groups which helped keep experimentwise error lower.

A review of the alignment of the TDI with the INTASC principles identified that three principles are not included. (Appendix A) This is explained by Schulte, Edick, Edwards, and Mackiel (2004) as,

The students did not formally develop items for principles 4, 8, and 10 because we believed that the items developed for principles 1 and 2 related to principle 4, items developed for principles 2 and 3 related to principle 8, and items developed for principles 7 and 9 related to principle 10. (p. 6)

Therefore, through the validation research, all INTASC principles are included in the TDI, but not all are identified in the alignment document.

Finally, a sample of the TDI with modifications will look as follows:

Please circle the item that best describes you.

Disposition Indicator	SD	D	N	A	SA	My teacher education program taught this disposition	
E1: I stimulate students' interest.	1	2	3	4	5	Yes	No

Note. SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

Data Analysis.

Data analysis took place in two stages. First was the analysis of the frequency of exhibited teacher dispositions and frequency of perception of whether the dispositions were taught. In other words, step one determined if novice teachers perceive they exhibit the

dispositions and if they perceive their college taught them the dispositions. The goals were to identify which dispositions were most frequently perceived to be exhibited and also to see if the novice teachers perceive that their teacher education program taught them the dispositions.

The second stage was comparing the exhibited dispositions based on various criteria such as institution type. A one-way analysis of variance (ANOVA) was selected as the statistical tool for comparing the various groups' exhibited dispositions. The ANOVA was selected in order to decrease the experimentwise error rate (Field, 2009). If simple t -tests were used it would require up to 45 different tests resulting in an experimentwise error of .901 ($1 - .95^{45} = .901$). In other words, there is a 90% chance of making one Type I error. Even if t -tests were used and the 45 tests were divided into the two subset, 25 student-centered dispositions and 20 professional/curriculum-centered dispositions, the probability of a Type I error is too great to meet the standards generally accepted by social scientists. The potential error for the 25 student-centered dispositions is .723 ($1 - .95^{25} = .723$). The potential error for the 20 professional/curriculum-centered dispositions is .642 ($1 - .95^{20} = .642$).

Analysis of variance was used to identify any statistical difference between groups. The comparable groups were institution type (large, public universities or small, private colleges and universities), gender (male or female) and age (25 and younger or 26 and older). Prior to analyzing the ANOVA, a Levene's test of homogeneity of variance was run. In cases of excessive variance, usually due to sample size, the Welch more robust test was used. SPSS software was used to run all tests (Field, 2009).

Chi square tests were used to look for differences between the groups' responses to the question if they felt their college or university taught the dispositions. Chi square was selected as the results were either *yes* or *no*; a dichotomous pair. The same three comparable groups were

reviewed. In cases where the expected count was less than five, the more robust Fisher exact was used (Field, 2009).

Summary

This quantitative study used a modified version of the Teacher Disposition Index to assess the perception of exhibited teacher dispositions of novice teachers. The population for the study included first-year teachers in a Midwestern state's public schools who graduated from NCATE accredited colleges and universities in the same state. The survey was conducted electronically. Data were analyzed using simple frequency distributions, analysis of variance, and chi square tests.

Chapter 4 - Data Analysis

As presented in Chapter 1, this study examines the dispositions of novice teachers. Specifically it addresses the three research questions: 1) To what extent do novice teachers self-report that they exhibit positive teacher dispositions? 2) To what extent do novice teachers perceive they were taught these same dispositions? 3) Do graduates of small, private, church affiliated Institutions of Higher Education (IHEs) display the assessed dispositions at the same rate as graduates of large, public, secular universities? This chapter is organized around these three questions.

Data Collection Procedure

The data were collected via an online survey. As explained below, participation was requested through use of the teachers' school district email accounts. The results were processed using the SPSS software package.

The target population for this study was novice teachers in a Midwestern state. The data set of potential participants was produced by the state department of education based on data gathered in the Licensed Personnel Report. The Licensed Personnel Report identifies, among other things, all first-year teachers who graduated from colleges and universities in the state. This report is compiled throughout the year and becomes public after approval by the state board of education each June. Fortunately, the list of potential participants was obtained in April, prior to the public release of the report. Therefore, the novice teachers identified in this report were completing the final months of their first year of teaching when the survey was distributed.

The data set requested from the state department of education listed some 1,400 teachers who fit the desired criteria. However, analysis of the data identified a number of teachers listed multiple times due to teaching various subjects. For example, due to differences in reporting

methods in various school districts, a teacher who taught Spanish I, Spanish II, and Spanish III may have been listed three times. All duplicate names were removed from the list. Seven hundred eighty-one novice teachers made up the population.

A search was conducted to find the email address of the 781 potential participants. Email addresses were acquired through district online directories, searching individual school websites, and a state-wide directory of school districts. In cases where the email address could not be identified via the means identified above, a likely email address of a participant was generated based on the district-wide pattern such as “last name first initial @usd###.com”.

Dissemination of the emails requesting participation in the survey occurred three times. Of the 781 emails sent out, 138 emails bounced back to the sender as invalid address or some other error. All 138 were investigated in an attempt to identify a “good” email. In five cases a different email address was identified that resulted in a completed survey. In all, 648 emails appear to be “good.”

Response Rate

Of the 648 requests that novice teachers received, 305 resulted in submitted surveys. This equates to a 47.1% return rate. The Axio software program used to administer the survey identified 38 surveys as “not finished”. A review of these 38 surveys showed respondents entered the demographic data, but none of the other survey questions had been completed.

The software package also considers a survey “complete” when a respondent clicks the “submit” button regardless of which questions are answered. Nine submitted surveys were marked as complete, but in reality were incomplete. These nine incomplete surveys and the 38 “not finished” surveys were eliminated. In all, 258 usable surveys were collected out of the 648 sent to the first-year teachers. The response rate of usable data is 39.8%.

Sample Description

The demographics portion of the survey asked participants to identify their gender, age and college or university from which they graduated. These data are used to create the description of the sample population. The majority of the respondents were females, 25 years old or younger from large universities.

A vast majority of the respondents (81%) were female, with only 19% male (see Table 2). The exact demographics of first-year teachers were unattainable, however overall demographics of the state's teachers indicate 75% are female and 25% are male (KSDE, 2011b).

The survey asked respondents to identify their age as "25 years old or younger" or "26 years old or older." The assumption is made that life experiences influence dispositions. Having only these two categories divides the respondents into one group, "25 years old or younger," who have most likely followed a traditional path of four or five years of college and then went straight into teaching. The other group, "26 years old or older," represent a group, that although they are first-year teachers, have most likely had some other life experiences that may have influenced their dispositions. Sixty point five percent of the respondents were 25 years old or younger and 39.5% were 26 years old or older (see Table 2).

Respondents were also asked to identify the institution of higher education (IHE) from which they graduated. These institutions were coded as either small, private, institutions or large, public institutions. Twenty-three point three percent of the respondents were from small, private, religious-founded institutions and the remaining 76.7% were from large, public institutions (see Table 2). This distribution mimics the 2008-09 Title II report, the most recently available, which identified 437 candidates (24%) seeking licensure from small, private institutions and 1376 candidates (76%) seeking licensure form large, public institutions (KSDE, 2011b).

Table 2 *Respondent Characteristics (in Percentages)*

Variable	no. (%)
Gender ^a	
male	49 (19.0)
female	209 (81.0)
Age ^a	
25 or younger	156 (60.5)
26 or older	102 (39.5)
Institution Type ^a	
small, private	60 (23.3)
large, public	198 (76.7)

Note. ^an=258.

The core of the survey asked respondents to identify to what extent they exhibited each of the 45 selected dispositions. To that end, respondents were asked to rate themselves on a five-point-scale of 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree). Table 3 presents the responses for each item on the survey by number and percent. The mean is also included. The higher the mean, the closer to “strongly agree”. As each item on this section of the survey is a separate disposition, the terms item and dispositions are used interchangeably when the data are reported.

Table 3 *Number, Percent, and Mean of Responses of Exhibited Dispositions*

Disposition	SD n (%)	D n (%)	N n (%)	A n (%)	SA n (%)	M
E1: I stimulate students' interests.	2 (0.8)	2 (0.8)	24 (9.3)	140 (54.3)	90 (34.9)	4.22
E2: I select material that is relevant for students.	1 (0.4)	2 (0.8)	15 (5.8)	128 (49.6)	112 (43.4)	4.35
E3: I select material that is interesting for students.	1 (0.4)	4 (1.6)	37 (14.3)	136 (52.7)	80 (31.0)	4.12
E4: I create connections to subject matter that are meaningful to students.	2 (0.8)	5 (1.9)	16 (6.2)	121 (46.9)	114 (44.2)	4.32
E5: I cooperate with colleagues in planning instruction.	5 (1.9)	10 (3.9)	24 (9.3)	69 (26.7)	150 (58.1)	4.35
E6: I value both long term and short term planning.	3 (1.2)	0 (0.0)	13 (5.0)	81 (31.4)	161 (62.4)	4.54
E7: I listen to colleagues' ideas and suggestions to improve instruction.	2 (0.8)	2 (0.8)	11 (4.3)	64 (24.8)	179 (69.4)	4.61
E8: I work well with others in implementing a common curriculum.	3 (1.2)	6 (2.3)	17 (6.6)	84 (32.6)	148 (57.4)	4.43
E9: I am committed to critical reflection for my professional growth.	2 (0.8)	0 (0.0)	10 (3.9)	93 (36.0)	153 (59.3)	4.53
E10: I provide appropriate feedback to encourage students in their development.	3 (1.2)	5 (1.9)	20 (7.8)	135 (52.3)	95 (36.9)	4.22

Disposition	SD n (%)	D n (%)	N n (%)	A n (%)	SA n (%)	M
E12: I uphold the laws and ethical codes governing the teaching profession.	3 (1.2)	0 (0.0)	1 (0.4)	59 (22.9)	195 (75.6)	4.72
E13: I stay current with the evolving nature of the teaching profession.	1 (0.4)	6 (2.3)	23 (8.9)	122 (47.3)	106 (41.1)	4.26
E14: I engage in discussions about new ideas in the teaching profession.	2 (0.8)	3 (1.2)	29 (11.2)	126 (48.8)	98 (38.0)	4.22
E15: I engage in research-based teaching practices.	1 (0.4)	9 (3.5)	33 (12.8)	114 (44.2)	101 (39.1)	4.18
E16: I am successful in facilitating learning for all students.	2 (0.8)	4 (1.6)	38 (14.7)	148 (57.4)	66 (25.6)	4.05
E17: I take initiative to promote ethical and responsible professional practice.	1 (0.4)	4 (1.6)	19 (7.4)	100 (38.8)	134 (51.9)	4.40
E18: I communicate effectively with students, parents, and colleagues.	2 (0.8)	4 (1.6)	19 (7.4)	124 (48.1)	109 (42.2)	4.29
E19: I demonstrate and encourage democratic interaction in the classroom and school.	1 (0.4)	2 (0.8)	26 (10.1)	129 (50.0)	100 (38.8)	4.26
E20: I accurately read the non-verbal communication of students.	2 (0.8)	3 (1.2)	14 (5.4)	134 (51.9)	105 (40.7)	4.31
E21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	3 (1.2)	0 (0.0)	0 (0.0)	33 (12.8)	222 (86.0)	4.83
E22: I believe that all students can learn.	3 (1.2)	0 (0.0)	3 (1.2)	32 (12.4)	220 (85.3)	4.81
E23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	2 (0.8)	1 (1.4)	0 (0.0)	37 (14.3)	218 (84.5)	4.81
E24: I understand students have certain needs that must be met before learning can take place.	2 (0.8)	2 (0.8)	2 (0.8)	42 (16.3)	210 (81.4)	4.77
E25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	2 (0.8)	1 (0.4)	1 (0.4)	40 (15.5)	214 (82.9)	4.79
E26: I understand that students learn in many different ways.	3 (1.2)	0 (0.0)	1 (0.4)	30 (11.6)	223 (86.4)	4.83
E27: I believe it is important to involve all students in learning.	2 (0.8)	1 (0.4)	2 (0.8)	39 (15.1)	214 (82.9)	4.79
E28: I understand that teachers' expectations impact student learning.	3 (1.2)	0 (0.0)	1 (0.4)	45 (17.4)	209 (81.0)	4.77
E29: I am sensitive to student differences.	2 (0.8)	2 (0.8)	15 (5.8)	86 (33.3)	153 (59.3)	4.50
E30: I respect the cultures of all students.	1 (0.4)	1 (0.4)	6 (2.3)	56 (21.7)	194 (75.2)	4.71
E31: I demonstrate qualities of humor, empathy, and warmth with others.	2 (0.8)	1 (0.4)	5 (1.9)	59 (22.9)	109 (73.6)	4.69
E32: I treat students with dignity and respect at all times.	2 (0.8)	3 (1.2)	10 (3.9)	74 (28.7)	169 (65.5)	4.57
E33: I am patient when working with students.	1 (0.4)	3 (1.2)	16 (6.2)	125 (48.4)	113 (43.8)	4.34
E34: I am a thoughtful and responsive listener.	1 (0.4)	3 (1.2)	7 (2.7)	97 (37.6)	150 (58.1)	4.52
E35: I communicate caring, concern, and a willingness to become involved with others.	2 (0.8)	1 (0.4)	6 (2.3)	79 (30.6)	170 (65.9)	4.60
E36: I assume responsibility when working with others.	1 (0.4)	2 (0.8)	9 (3.5)	76 (29.5)	170 (65.9)	4.60
E37: I view teaching as a collaborative effort among educators.	2 (0.8)	0 (0.0)	14 (5.4)	64 (24.8)	178 (69)	4.61
E38: I am open to adjusting and revising my plans to meet student needs.	1 (0.4)	1 (0.4)	2 (0.8)	57 (22.1)	197 (76.4)	4.74
E39: I believe it is important to learn about students and their community.	3 (1.2)	0 (0.0)	1 (0.4)	70 (27.1)	184 (71.3)	4.67

Disposition	SD n (%)	D n (%)	N n (%)	A n (%)	SA n (%)	M
E41: I am punctual and reliable in my attendance.	2 (0.8)	1 (0.4)	4 (1.6)	35 (13.6)	216 (83.7)	4.79
E42: I maintain a professional appearance.	2 (0.8)	1 (0.4)	3 (1.2)	47 (18.2)	204 (79.1)	4.75
E43: I honor my commitments.	3 (1.2)	0 (0.0)	1 (0.4)	48 (18.6)	206 (79.8)	4.76
E44: I am willing to receive feedback and assessment of my teaching.	2 (0.8)	1 (0.4)	0 (0.0)	41 (15.9)	214 (82.9)	4.80
E45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	2 (0.8)	2 (0.8)	4 (1.6)	61 (23.6)	189 (73.3)	4.68

Note. Item label E1, E2, E3...=exhibited disposition; SD=Strongly Disagree; D=Disagree; N=Neutral; A=Agree; SA=Strongly Agree; M=mean; n=258.

Another portion of the survey asked respondents to identify if they thought the college or university from which they graduated taught them these dispositions. Respondents were asked to mark “yes” if they felt they were taught the dispositions and “no” if they felt they were not taught it. “Yes” was coded as a one (1) and “no” as a two (2). Table 4 presents the count and percent of the responses indicating if the respondents felt they were taught or not taught the dispositions.

Table 4 *Number and Percent of Responses of Perception of Taught the Dispositions*

Disposition	"Yes taught"	"Not taught"
	n (%)	n (%)
T1: I stimulate students' interests.	226 (87.6)	32 (12.4)
T2: I select material that is relevant for students.	227 (88.0)	31 (12.0)
T3: I select material that is interesting for students.	218 (84.5)	40 (15.5)
T4: I create connections to subject matter that are meaningful to students.	233 (90.3)	25 (9.7)
T5: I cooperate with colleagues in planning instruction.	206 (79.8)	52 (20.2)
T6: I value both long term and short term planning.	213 (82.6)	45 (17.4)
T7: I listen to colleagues' ideas and suggestions to improve instruction.	223 (86.4)	35 (13.6)
T8: I work well with others in implementing a common curriculum.	199 (77.1)	59 (22.9)
T9: I am committed to critical reflection for my professional growth.	241 (93.4)	17 (6.6)
T10: I provide appropriate feedback to encourage students in their development.	216 (83.7)	42 (16.3)

Disposition	"Yes taught" n (%)	"Not taught" n (%)
T12: I uphold the laws and ethical codes governing the teaching profession.	243 (94.2)	15 (5.8)
T13: I stay current with the evolving nature of the teaching profession.	230 (89.1)	28 (10.9)
T14: I engage in discussions about new ideas in the teaching profession.	228 (88.4)	30 (11.6)
T15: I engage in research-based teaching practices.	232 (89.9)	26 (10.1)
T16: I am successful in facilitating learning for all students.	231 (89.5)	27 (10.5)
T17: I take initiative to promote ethical and responsible professional practice.	247 (95.7)	11 (4.3)
T18: I communicate effectively with students, parents, and colleagues.	197 (76.4)	61 (23.6)
T19: I demonstrate and encourage democratic interaction in the classroom and school.	199 (77.1)	59 (22.9)
T20: I accurately read the non-verbal communication of students.	173 (67.1)	85 (32.9)
T21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	250 (96.9)	8 (3.1)
T22: I believe that all students can learn.	249 (96.5)	9 (3.5)
T23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	248 (96.1)	10 (3.9)
T24: I understand students have certain needs that must be met before learning can take place.	239 (92.6)	19 (7.4)
T25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	241 (93.4)	17 (6.6)
T26: I understand that students learn in many different ways.	253 (98.1)	5 (1.9)
T27: I believe it is important to involve all students in learning.	247 (95.7)	11 (4.3)
T28: I understand that teachers' expectations impact student learning.	238 (92.2)	20 (7.8)
T29: I am sensitive to student differences.	229 (88.8)	29 (11.2)
T30: I respect the cultures of all students.	239 (92.6)	19 (7.4)
T31: I demonstrate qualities of humor, empathy, and warmth with others.	199 (77.1)	59 (22.9)
T32: I treat students with dignity and respect at all times.	230 (89.1)	28 (10.9)
T33: I am patient when working with students.	209 (81.0)	49 (19.0)
T34: I am a thoughtful and responsive listener.	212 (82.2)	46 (17.8)
T35: I communicate caring, concern, and a willingness to become involved with others.	219 (84.9)	39 (15.1)
T36: I assume responsibility when working with others.	224 (86.8)	34 (13.2)
T37: I view teaching as a collaborative effort among educators.	234 (90.7)	23 (8.9)
T38: I am open to adjusting and revising my plans to meet student needs.	242 (93.8)	16 (6.2)
T39: I believe it is important to learn about students and their community.	230 (89.1)	28 (10.9)

Disposition	"Yes taught" n (%)	"Not taught" n (%)
T41: I am punctual and reliable in my attendance.	244 (94.6)	13 (5.0)
T42: I maintain a professional appearance.	242 (93.8)	16 (6.2)
T43: I honor my commitments.	234 (90.7)	24 (9.3)
T44: I am willing to receive feedback and assessment of my teaching.	250 (96.9)	8 (3.1)
T45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	237 (91.9)	21 (8.1)
<i>Note.</i> Item label T1, T2, T3...=perceived taught dispositions; n=258.		

Responses to the Research Questions

The survey used to address the three research questions in this study included 45 positively worded teacher disposition statements. The respondents were asked to first indicate their level of agreement with the statement. In other words, do they report they exhibit the selected dispositions? Also they were asked to indicate if they perceive they were taught or not taught these same dispositions by the college or university from which they graduated. The first two research questions can generally be described through basic frequency distributions. Question three, however, uses comparative statistics. The three research questions will be explored in order.

Question 1.

To what extent do novice teachers self-report that they exhibit selected, positive teacher dispositions? The dispositions on the survey were divided into two subsets: student-centered (S-C) dispositions and professional/curriculum-centered (P/C-C) dispositions. After an aggregated summary, each subset of dispositions is reviewed separately.

As was anticipated, the respondents indicated that they exhibited the identified dispositions. The frequency distribution shows a negative skew on each of the 45 dispositions. The mean skew of the 45 dispositions is -2.367. Due to the strong skew, the data were analyzed by combining the percents of those respondents who indicated *agree* and *strongly agree*. An aggregate review of all 45 dispositions shows that 93.6% of respondents *agree* or *strongly agree* that they exhibit the dispositions.

As previously mentioned, the 45 dispositions are divided into two subsets. Twenty-five dispositions fall into the subset student-centered (S-C) dispositions and the other 20 dispositions are considered professional/curriculum-centered (P/C-C) dispositions. In general, a review of responses identified a higher level of agreement with the student-centered dispositions (97.0%) than with the professional/curriculum-centered dispositions (89.3%). The percentage of responses showing *agree* or *strongly agree* that they exhibit the student-centered dispositions was 97.0%. Those *agreeing* or *strongly agreeing* that they exhibit the professional/curriculum-centered dispositions was 89.3% (see Table 5).

Table 5 *Percent of Responses Showing “Agree” and “Strongly Agree” to Exhibit the Dispositions*

Group	%
All Dispositions	93.6
Student-centered Subset	97.0
Professional/Curriculum-centered Subset	89.3

Table 6 displays a ranking of the percent of respondents that *agree* or *strongly agree* that they exhibit each of the 45 selected dispositions. With the exception of one disposition, *I uphold the laws and ethical codes governing the teaching profession*, the top 22 dispositions are all part of the student-centered subset. Conversely, all but four of the bottom 23 dispositions are from

the professional/curriculum-centered subset. There are 25 student-centered dispositions and 20 professional/curriculum-centered dispositions.

Table 6 Rank by Percent of Respondents who “Agree” and “Strongly Agree” They Exhibit the Dispositions

Rank	Disposition	%	Subset
1	E21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	98.8	S/C
1	E23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	98.8	S/C
1	E44: I am willing to receive feedback and assessment of my teaching.	98.8	S/C
4	E12: I uphold the laws and ethical codes governing the teaching profession.	98.5	P/C-C
4	E26: I understand that students learn in many different ways.	98.5	S/C
4	E38: I am open to adjusting and revising my plans to meet student needs.	98.5	S/C
7	E25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	98.4	S/C
7	E28: I understand that teachers' expectations impact student learning.	98.4	S/C
7	E39: I believe it is important to learn about students and their community.	98.4	S/C
7	E43: I honor my commitments.	98.4	S/C
11	E40: I view teaching as an important profession.	98.1	S/C
12	E27: I believe it is important to involve all students in learning.	98.0	S/C
13	E22: I believe that all students can learn.	97.7	S/C
13	E24: I understand students have certain needs that must be met before learning can take place.	97.7	S/C
13	E42: I maintain a professional appearance.	97.7	S/C
16	E41: I am punctual and reliable in my attendance.	97.3	S/C
17	E30: I respect the cultures of all students.	96.9	S/C
17	E31: I demonstrate qualities of humor, empathy, and warmth with others.	96.9	S/C
17	E45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	96.9	S/C
20	E35: I communicate caring, concern, and a willingness to become involved with others.	96.5	S/C
21	E34: I am a thoughtful and responsive listener.	95.7	S/C
22	E36: I assume responsibility when working with others.	95.4	S/C
23	E9: I am committed to critical reflection for my professional growth.	95.3	P/C-C
24	E7: I listen to colleagues' ideas and suggestions to improve instruction.	94.2	P/C-C
24	E32: I treat students with dignity and respect at all times.	94.2	S/C
26	E6: I value both long term and short term planning.	93.8	P/C-C
26	E37: I view teaching as a collaborative effort among educators.	93.8	S/C
28	E2: I select material that is relevant for students.	93.0	P/C-C
29	E20: I accurately read the non-verbal communication of students.	92.6	P/C-C
29	E29: I am sensitive to student differences.	92.6	S/C
31	E33: I am patient when working with students.	92.2	S/C
32	E4: I create connections to subject matter that are meaningful to students.	91.1	P/C-C
33	E17: I take initiative to promote ethical and responsible professional practice.	90.7	P/C-C
34	E18: I communicate effectively with students, parents, and colleagues.	90.3	P/C-C
35	E8: I work well with others in implementing a common curriculum.	90.0	P/C-C
36	E1: I stimulate students' interests.	89.2	P/C-C
37	E10: I provide appropriate feedback to encourage students in their development.	89.1	P/C-C
38	E19: I demonstrate and encourage democratic interaction in the classroom and school.	88.8	P/C-C
39	E13: I stay current with the evolving nature of the teaching profession.	88.4	P/C-C
40	E14: I engage in discussions about new ideas in the teaching profession.	86.8	P/C-C
41	E5: I cooperate with colleagues in planning instruction.	84.8	P/C-C
42	E3: I select material that is interesting for students.	83.7	P/C-C

43	E15: I engage in research-based teaching practices.	83.3	P/C-C
44	E16: I am successful in facilitating learning for all students.	83.0	P/C-C
45	E11: I actively seek out professional growth opportunities.	80.3	P/C-C

Note. P/C-C=Professional/Curriculum-centered subset; S-C= Student-centered subset; n=258.

Student-centered dispositions.

Overall, the percent of respondents who felt they exhibited the dispositions in the student-centered subset was higher than those who felt they exhibited the dispositions in the professional/curriculum-centered subset. As mentioned above, 97% of respondents indicated they *agreed* or *strongly agreed* that they exhibited these dispositions (see Table 5). The range of the 25 dispositions in this subset was from 98.8% agreement to 92.2%.

Table 3, above, includes the number and percent of respondents for each of the 25 student-centered dispositions. The mean is also presented. Because the survey was given as a Likert-type scale with 1 as Strongly Disagree and 5 as Strongly Agree, a mean closer to one (1) suggests less agreement that the respondents exhibit the selected disposition. Conversely, a mean closer to five (5) suggests more agreement that the respondents exhibit the selected disposition.

Professional/curriculum-centered dispositions.

As previously mentioned, just under 90% of the respondents indicated that they *agree* or *strongly agree* that they exhibit the 20 professional/curriculum-centered dispositions. These 20 indicators range from 98.5% agreement to 80.3% agreement (see Table 6).

The item with which there is the highest agreement is *I uphold the laws and ethical codes governing the teaching profession* (98.5%). The item with the lowest level of agreement (80.3%) is *I actively seek out professional growth opportunities*.

Table 3 presents the number and percent of respondents for each of the 20 professional/curriculum-centered dispositions. The mean is also presented. Because the survey was given as a Likert-type scale with 1 as Strongly Disagree and 5 as Strongly Agree, a mean closer to one (1) suggests less agreement that the respondents exhibit the selected disposition. Conversely, a mean closer to five (5) suggests more agreement that the respondents exhibit the selected disposition.

Question 2.

To what extent do novice teachers perceive they were taught these same dispositions? In an attempt to answer this research question, respondents were asked to mark “yes” if they felt the college or university from which they graduated taught each disposition or, conversely, “no” if they felt they were not taught them. The aggregated summary is presented followed by a review of the dispositions as divided by the two subsets: student-centered dispositions and professional/curriculum-centered dispositions.

Overall, the respondents indicated that they believe the college or university from which they graduated taught them the selected dispositions. A cumulative review of all 45 dispositions shows that 88.51% (SD=6.94) of responses were positive for teaching the dispositions. The responses indicated a higher level agreement with the student-centered dispositions (91.31, SD=5.43) than the professional/curriculum-centered dispositions (85.02, SD=7.15) (see Table 7).

Table 7 Percent of Responses That Were Positive for Teaching Dispositions

Group	% (SD)
All dispositions	88.51 (6.94)
Student-Centered Subset	91.31 (5.43)
Professional/Curriculum-centered Subset	85.02 (7.15)

Note. n=258

In general, the responses for research questions 1 and 2 are very similar. The respondents report overall high agreement suggesting that respondents generally believe they exhibit the selected dispositions and they also perceive they were taught these dispositions. Ninety-three point six percent of respondents reported they exhibit the dispositions and 88.51% believe they were taught the dispositions. Also for both questions 1 and 2 the respondents rated the dispositions in the student-centered subset (97% and 91.31% respectively) higher than the dispositions in the professional/curriculum-centered subset (89.3% and 85.02% respectively). In summary, the respondents indicated at a high rate that they both exhibit the dispositions and that they were taught the dispositions, but they exhibit them more than they were taught them.

Table 8 shows a ranking of dispositions by the percent of respondents who indicated they were taught the disposition. The table also identifies the subset to which each disposition is aligned. In general, student-centered dispositions are clustered toward the top of the table while the professional/curriculum-centered dispositions are clustered toward the bottom. However, this division is not nearly as defined as it was with the responses to question 1 (see Table 6). These data reinforce the data in Table 7 that the respondents report they were taught the student-centered dispositions more than the professional/curriculum-centered dispositions.

Table 8 Rank by Percent Who Perceive They Were Taught the Dispositions

Rank	Disposition	%	Subset
1	T26: I understand that students learn in many different ways.	98.1	S-C
2	T21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	96.9	S-C
2	T44: I am willing to receive feedback and assessment of my teaching.	96.9	S-C
4	T22: I believe that all students can learn.	96.5	S-C
4	T40: I view teaching as an important profession.	96.5	S-C
6	T23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	96.1	S-C
7	T27: I believe it is important to involve all students in learning.	95.7	S-C
7	T17: I take initiative to promote ethical and responsible professional practice.	95.7	P/C-C
9	T41: I am punctual and reliable in my attendance.	94.9	S-C
10	T12: I uphold the laws and ethical codes governing the teaching profession.	94.2	P/C-C
11	T38: I am open to adjusting and revising my plans to meet student needs.	93.8	S-C
11	T42: I maintain a professional appearance.	93.8	S-C
13	T25: I believe it is my job to create a learning environment that is conducive to the	93.4	S-C

Rank	Disposition	%	Subset
	development of students' self-confidence and competence.		
13	T9: I am committed to critical reflection for my professional growth.	93.4	P/C-C
15	T24: I understand students have certain needs that must be met before learning can take place.	92.6	S-C
15	T30: I respect the cultures of all students.	92.6	S-C
17	T28: I understand that teachers' expectations impact student learning.	92.2	S-C
18	T45: I am communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	91.9	S-C
19	T37: I view teaching as a collaborative effort among educators.	91.1	S-C
20	T43: I honor my commitments.	90.7	S-C
21	T4: I create connections to subject matter that are meaningful to students.	90.3	P/C-C
22	T15: I engage in research-based teaching practices.	89.9	P/C-C
23	T16: I am successful in facilitating learning for all students.	89.5	P/C-C
24	T32: I treat students with dignity and respect at all times.	89.1	S-C
24	T39: I believe it is important to learn about students and their community.	89.1	S-C
24	T13: I stay current with the evolving nature of the teaching profession.	89.1	P/C-C
27	T29: I am sensitive to student differences.	88.8	S-C
28	T14: I engage in discussions about new ideas in the teaching profession.	88.4	P/C-C
29	T2: I select material that is relevant for students.	88.0	P/C-C
30	T1: I stimulate students' interests.	87.6	P/C-C
31	T36: I assume responsibility when working with others.	86.8	S-C
32	T7: I listen to colleagues' ideas and suggestions to improve instruction.	86.4	P/C-C
33	T35: I communicate caring, concern, and a willingness to become involved with others.	84.9	S-C
34	T3: I select material that is interesting for students.	84.5	P/C-C
35	T10: I provide appropriate feedback to encourage students in their development.	83.7	P/C-C
36	T6: I value both long term and short term planning.	82.6	P/C-C
37	T34: I am a thoughtful and responsive listener.	82.2	S-C
38	T33: I am patient when working with students.	81.0	S-C
39	T5: I cooperate with colleagues in planning instruction.	79.8	P/C-C
40	T11: I actively seek out professional growth opportunities.	79.5	P/C-C
41	T31: I demonstrate qualities of humor, empathy, and warmth with others.	77.1	S-C
41	T8: I work well with others in implementing a common curriculum.	77.1	P/C-C
41	T19: I demonstrate and encourage democratic interaction in the classroom and school.	77.1	P/C-C
44	T18: I communicate effectively with students, parents, and colleagues.	76.4	P/C-C
45	T20: I accurately read the non-verbal communication of students.	67.1	P/C-C

Note. Item label T1, T2, T3...= perceived taught dispositions; S/C= Student-Centered Subset; P/C-C= Professional/Curriculum Centered Subset; n=258.

Student-centered dispositions.

As previously mentioned the mean percent of responses indicated the participants believe their college or university taught the student-centered dispositions is 91.3 (SD=5.43). The 25 dispositions in this subset range from 98.1% to 77.1% (see Table 8).

The item the respondents most perceived the colleges and universities taught was, *I understand that students learn in many different ways* (98.1%). The item with the lowest mean percentage (77.1%) was *I demonstrate qualities of humor, empathy, and warmth with others*.

Table 9 presents the number and percent of respondents who perceive they were taught each of the 25 student-centered dispositions. This section of the survey used a dichotomous pair with one meaning they believe they were taught the dispositions and two meaning they did not believe they were taught the disposition.

Table 9 Number and Percent of Respondents Who Indicate They Were Taught the Student-centered Dispositions

Disposition	"Yes-taught"		"Not taught"	
	n	%	n	%
T21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	250	96.9	8	3.1
T22: I believe that all students can learn.	249	96.5	9	3.5
T23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	248	96.1	10	3.9
T 24: I understand students have certain needs that must be met before learning can take place.	239	92.6	19	7.4
T25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	241	93.4	17	6.6
T26: I understand that students learn in many different ways.	253	98.1	5	1.9
T27: I believe it is important to involve all students in learning.	247	95.7	11	4.3
T28: I understand that teachers' expectations impact student learning.	238	92.2	20	7.8
T29: I am sensitive to student differences.	229	88.8	29	11.2
T30: I respect the cultures of all students.	239	92.6	19	7.4
T31: I demonstrate qualities of humor, empathy, and warmth with others.	199	77.1	59	22.9
T32: I treat students with dignity and respect at all times.	230	89.1	28	10.9
T33: I am patient when working with students.	209	81	49	19
T34: I am a thoughtful and responsive listener.	212	82.2	46	17.8
T35: I communicate caring, concern, and a willingness to become involved with others.	219	84.9	39	15.1
T36: I assume responsibility when working with others.	224	86.8	34	13.2
T37: I view teaching as a collaborative effort among educators.	234	90.7	23	8.9
T38: I am open to adjusting and revising my plans to meet student needs.	242	93.8	16	6.2
T39: I believe it is important to learn about students and their community.	230	89.1	28	10.9
T40: I view teaching as an important profession.	248	96.1	9	3.5
T41: I am punctual and reliable in my attendance.	244	94.6	13	5
T42: I maintain a professional appearance.	242	93.8	16	6.2
T43: I honor my commitments.	234	90.7	24	9.3
T44: I am willing to receive feedback and assessment of my teaching.	250	96.9	8	3.1
T45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	237	91.9	21	8.1

Note. Item labels T21, T22, T23...=perceived taught dispositions; n=258.

Professional /curriculum-centered dispositions.

The majority of responses indicated the participants perceived the colleges and universities taught them the professional/curriculum-centered dispositions. Overall, the mean percent of responses indicated they perceive their college or university taught them the professional/curriculum-centered dispositions is 85.02 (SD=7.15) (see Table 7).

Three cluster areas are identified within the professional/curriculum-centered dispositions. They are ethics, communication and planning. The respondents indicate that the colleges and universities are teaching ethical issues related to the teaching profession. The two dispositions with the highest mean percent both deal with ethics. Ninety-five point seven percent of respondents perceive they were taught *I take initiative to promote ethical and responsible professional practice* and *I uphold the laws and ethical codes governing the teaching profession* had 94.2 mean percent agreement. Similarly the lowest ranked dispositions cluster around the topic communication. The dispositions *I communicate effectively with students, parents, and colleagues* and *I accurately read the non-verbal communication of students*, had mean percentages of 76.4 and 67.1, respectively. A third cluster topic is that of planning. Ranked as items 14 and 15, the dispositions *I value both long term and short term planning* and *I cooperate with colleagues in planning instruction* have the mean percentages of 82.6 and 79.8, respectively (see Table 8).

Table 10 presents the number and percent of respondents for each of the 20 professional/curriculum-centered dispositions. This section of the survey used a dichotomous pair with one meaning they perceive they were taught the dispositions and two meaning they did not believe they were taught the disposition.

Table 10 Number and Percent of Respondents Indicating They Were Taught or Not Taught the Professional/Curriculum-centered Dispositions

Disposition	"Yes-taught"		Not taught	
	n	%	n	%
T1: I stimulate students' interests.	226	87.6	32	12.4
T2: I select material that is relevant for students.	227	88.0	31	12.0
T3: I select material that is interesting for students.	218	84.5	40	15.5
T4: I create connections to subject matter that are meaningful to students.	233	90.3	25	9.7
T5: I cooperate with colleagues in planning instruction.	206	79.8	52	20.2
T6: I value both long term and short term planning.	213	82.6	45	17.4
T7: I listen to colleagues' ideas and suggestions to improve instruction.	223	86.4	35	13.6
T8: I work well with others in implementing a common curriculum.	199	77.1	59	22.9
T9: I am committed to critical reflection for my professional growth.	241	93.4	17	6.6

Disposition	"Yes-taught"		Not taught	
	n	%	n	%
T10: I provide appropriate feedback to encourage students in their development.	216	83.7	42	16.3
T11: I actively seek out professional growth opportunities.	205	79.5	53	20.5
T12: I uphold the laws and ethical codes governing the teaching profession.	243	94.2	15	5.8
T13: I stay current with the evolving nature of the teaching profession.	230	89.1	28	10.9
T14: I engage in discussions about new ideas in the teaching profession.	228	88.4	30	11.6
T15: I engage in research-based teaching practices.	232	89.9	26	10.1
T16: I am successful in facilitating learning for all students.	231	89.5	27	10.5
T17: I take initiative to promote ethical and responsible professional practice.	247	95.7	11	4.3
T18: I communicate effectively with students, parents, and colleagues.	197	76.4	61	23.6
T19: I demonstrate and encourage democratic interaction in the classroom and school.	199	77.1	59	22.9
T20: I accurately read the non-verbal communication of students.	173	67.1	85	32.9

Note. n=258.

Question 3.

Research question three compares the responses of those from the large, public universities to the responses of those from the smaller, private colleges and universities. Specifically, the question asked *Do graduates of small, private, church affiliated Institutions of Higher Education (IHEs) display the assessed dispositions at the same rate as graduates of large, public, secular universities?* In addition to presenting this specific information, data comparing the gender and age of respondents is also presented.

A one-way analysis of variance (ANOVA) was selected as the statistical tool for comparing the various groups' exhibited dispositions. The ANOVA was selected in order to decrease the experimentwise error rate (Field, 2009). In order to reduce the size of the ANOVA, the 45 indicators were divided by the two previously mentioned subsets. Twenty indicators make up the professional/curriculum-centered subset and 25 make up the student-centered

subset. All comparative analyses used these two subsets in an effort to maintain tests' size and thereby reducing testing error.

Prior to running each analysis of variance test, a Levene's test was used to determine if there was significant variation in the compared groups. In those cases where there was significant variance the ANOVA results were not valid, as there was a higher chance of inaccurate results. In such cases, the more robust Welch test was used (Field, 2009).

Chi square tests were used to compare the groups' responses to the question if they thought they were taught the dispositions or not. The chi square was chosen as the responses were the dichotomous pair *yes* or *no*.

Multiple comparison tests were computed. Approximately half of the tests explored the exhibited dispositions using ANOVA tests and the other half explored if the dispositions were taught or not using chi square tests. The tests were run on the following variables: school type/size (large, public or small, private), gender, and age. For each variable, the dispositions were divided by the previously mentioned student-centered subset and the professional/curriculum-centered subset. Table 11 is a list of the comparison tests. The remainder of this section will present the data in the order identified in Table 11.

Table 11 *List of Statistical Tests*

ANOVA of exhibit student-centered dispositions by IHE type
ANOVA of exhibit professional/curriculum-centered dispositions by IHE type
ANOVA of exhibit student-centered dispositions by gender
ANOVA of exhibit professional/curriculum-centered dispositions by gender
ANOVA of exhibit student-centered dispositions by age
ANOVA of exhibit professional/curriculum-centered dispositions by age
Chi square of were taught student centered dispositions by IHE type
Chi square of were taught professional/curriculum centered dispositions by IHE type
Chi square of were taught student centered dispositions by gender
Chi square of were taught professional/curriculum centered dispositions by gender
Chi square of were taught student-centered dispositions by age

A brief summary of the data findings of the exhibited dispositions is presented here. In aggregate reviews of all 45 dispositions, there are no significant differences in groups by IHE type or by age. However, there is a significant difference between the males and females. Additional significant differences can be found when reviewing individual dispositions. There is a significant difference between the graduates of large, public universities and small, private colleges and universities on only one of the 45 disposition. When comparing the respondents by gender, 16 of the 45 dispositions showed a significant difference. The females exhibited the dispositions at a higher rate than the males on all 45 dispositions. Three items showed significant difference when comparing respondents by age. In all three cases, the respondents who indicate they are in the group *25 years-old or younger* exhibit the dispositions at a higher rate than those who identify with the group *26 years-old or older*.

The other portion of the study is the perception of if the respondents perceived they were taught the dispositions. A summary of this data is presented here. An aggregate review showed there is no difference in the perception that the dispositions were taught when comparing by IHE type, gender, or age. Reviewing the individual dispositions identified seven in which there is significant difference between the graduates of the large, public universities and those from the small, private colleges and universities. On only two dispositions there is significant difference between the male and female respondents. In both cases the males indicated they perceived they were taught these dispositions more than the females. Reviewing the data of perceived instruction of dispositions by age there is only one disposition with significant difference. In this case, those 26 years-old and older indicated they perceive they were taught the disposition more than those 25 years-old and younger.

Comparison of exhibited dispositions by IHE type.

Of the 258 respondents, 76% (n=197) were identified as graduates of large, public universities. Conversely, 24% (n=61) claim to be graduates of small, private colleges and universities. The mean of all responses for graduates of large, public universities is 4.53, sd=.489. The mean of all responses for graduates of small, private colleges and universities is 4.54, sd=.315. An ANOVA of all responses for these two groups show no significant difference.

A Levene's test identified a lack of uniformity of the two comparable groups and consequently the assumption of homogeneity of variance was violated on five dispositions. Therefore, the more robust Welch test was used when needed. In all, a significant difference was found on only one of the 45 dispositions, *I believe that all students can learn*. However, the assumption of homogeneity of variance was violated so the Welch f-ratio is provided $f(1, 211.635) = 4.527, p = .035$. The respondents from the small, private colleges and universities exhibited this disposition at a higher rate than those from the large, public universities.

Student-centered dispositions.

As mentioned above, the 45 dispositions on the survey are divided into two subsets: the 25 student-centered dispositions and the 20 professional/curriculum-centered dispositions. The 25 student-centered dispositions are explored here.

Using Levene's test, four of the 25 dispositions were found to have significant inequality of variance at $p < .05$. Consequently, the more robust Welch test was computed. Even with the more robust test applied, only the disposition *I believe that all students can learn* showed significant difference. The respondents from the small, private colleges and universities indicated they exhibited the dispositions at a higher rate than those from the large, public universities.

Despite this one significant difference, however, overall there was an even split when comparing the two groups. For twelve of the dispositions, the respondents from the large, public universities showed a higher mean. Conversely the respondents from the small, private colleges and universities displayed a higher mean (more agreement) on the other 13 items. Table 12 displays the results of the ANOVA and Table 13 displays the more robust results from the Welch test for the four dispositions with unequal variance.

Table 12 ANOVA of Exhibited Student-centered Dispositions by IHE Type

Disposition ^a		Sum of Squares	Mean Square	F(1,256)	Sig.
E 23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	Between Groups	.003	.003	.010	.922
	Within Groups	69.067	.270		
	Total	69.070			
E24: I understand students have certain needs that must be met before learning can take place.	Between Groups	.218	.218	.650	.421
	Within Groups	85.829	.335		
	Total	86.047			
E25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	Between Groups	.138	.138	.476	.491
	Within Groups	73.975	.289		
	Total	74.112			
E26: I understand that students learn in many different ways.	Between Groups	.004	.004	.014	.904
	Within Groups	74.463	.292		
	Total	74.467			
E27: I believe it is important to involve all students in learning.	Between Groups	.033	.033	.109	.742
	Within Groups	76.665	.299		
	Total	76.698			
E28: I understand that teachers' expectations impact student learning.	Between Groups	.200	.200	.614	.434
	Within Groups	83.308	.325		
	Total	83.508			
E29: I am sensitive to student differences.	Between Groups	.161	.161	.316	.575
	Within Groups	130.335	.509		
	Total	130.496			
E30: I respect the cultures of all students.	Between Groups	.034	.034	.106	.745
	Within Groups	83.163	.325		
	Total	83.198			
E31: I demonstrate qualities of humor, empathy, and warmth with others.	Between Groups	.085	.085	.228	.633
	Within Groups	95.012	.373		
	Total	95.097			
E32: I treat students with dignity and respect at all times.	Between Groups	.066	.066	.135	.713
	Within Groups	125.178	.489		
	Total	125.244			
E33: I am patient when working with students.	Between Groups	.031	.031	.065	.799
	Within Groups	119.954	.469		
	Total	119.984			
E34: I am a thoughtful and responsive listener.	Between Groups	.154	.154	.365	.546
	Within Groups	108.249	.423		
	Total	108.403			
E35: I communicate caring, concern, and a willingness to become involved with others.	Between Groups	.324	.324	.802	.371
	Within Groups	103.351	.404		
	Total	103.674			

E36: I assume responsibility when working with others.	Between Groups Within Groups Total	.043 104.035 104.078	.043 .406	.105	.746
E37: I view teaching as a collaborative effort among educators.	Between Groups Within Groups Total	.285 112.955 113.240	.285 .441	.646	.422
E38: I am open to adjusting and revising my plans to meet student needs.	Between Groups Within Groups Total	.018 72.059 72.078	.018 .281	.065	.799
Disposition ^a		Sum of Squares	Mean Square	F(1,256)	Sig.
E39: I believe it is important to learn about students and their community.	Between Groups Within Groups Total	.000 94.651 94.651	.000 .370	.001	.973
E42: I maintain a professional appearance.	Between Groups Within Groups Total	.030 84.032 84.062	.030 .330	.092	.761
E43: I honor my commitments.	Between Groups Within Groups Total	.118 84.983 85.101	.118 .332	.354	.552
E44: I am willing to receive feedback and assessment of my teaching.	Between Groups Within Groups Total	.011 71.509 71.519	.011 .279	.038	.845
E45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	Between Groups Within Groups Total	.121 100.177 100.298	.121 .391	.310	.578

Note. ^an= 258.

Table 13 *Welch Test of Exhibited Student-centered Dispositions by IHE Type*

Disposition ^a		Statistic ^b	df1	df2	Sig.
E21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	Welch	3.081	1	199.831	.081
E22: I believe that all students can learn.	Welch	4.527	1	211.635	.035*
E40: I view teaching as an important profession.	Welch	2.431	1	203.726	.121
E41: I am punctual and reliable in my attendance.	Welch	1.644	1	173.401	.201

Note. ^an= 258. ^b Asymptotically F distributed. *p<.05.

Professional/curriculum-centered dispositions.

Of the twenty dispositions in the professional/curriculum-centered subset, none were found to be significantly different. One item violated the assumption of homogeneity of variance so the more robust Welch's test was employed. However, even this more robust test did not identify any significant differences.

For twelve dispositions respondents from the large, public universities had a higher mean than those from the small, private colleges and universities. The mean average for respondents

from the large, public universities was 4.33 and the mean average for those from small, private colleges and universities was 4.32. A mean of 4.0 represents agreement of exhibiting the dispositions and a mean of 5 would represent strong agreement of exhibiting the dispositions. Table 14 and Table 15 represent the ANOVA and Welch test, respectively, for the professional/curriculum-centered dispositions.

Table 14 ANOVA of Exhibited Professional/Curriculum-centered Dispositions by IHE Type

Disposition ^a		Sum of Squares	Mean Square	F(1, 256)	Sig.
E1: I stimulate students' interests.	Between Groups	.001	.001	.002	.960
	Within Groups	127.844	.499		
	Total	127.845			
E2: I select material that is relevant for students.	Between Groups	.159	.159	.362	.548
	Within Groups	112.446	.439		
	Total	112.605			
E3: I select material that is interesting for students.	Between Groups	.253	.253	.470	.493
	Within Groups	137.778	.538		
	Total	138.031			
E4: I create connections to subject matter that are meaningful to students.	Between Groups	.413	.413	.748	.388
	Within Groups	141.525	.553		
	Total	141.938			
E5: I cooperate with colleagues in planning instruction.	Between Groups	.006	.006	.006	.936
	Within Groups	226.897	.886		
	Total	226.903			
E6: I value both long term and short term planning.	Between Groups	.016	.016	.033	.857
	Within Groups	126.096	.493		
	Total	126.112			
E7: I listen to colleagues' ideas and suggestions to improve instruction.	Between Groups	.616	.616	1.329	.250
	Within Groups	118.624	.463		
	Total	119.240			
E8: I work well with others in implementing a common curriculum.	Between Groups	.535	.535	.813	.368
	Within Groups	168.566	.658		
	Total	169.101			
E9: I am committed to critical reflection for my professional growth.	Between Groups	.123	.123	.291	.590
	Within Groups	108.129	.422		
	Total	108.252			
E10: I provide appropriate feedback to encourage students in their development.	Between Groups	.712	.712	1.223	.270
	Within Groups	149.133	.583		
	Total	149.845			
E11: I actively seek out professional growth opportunities.	Between Groups	.013	.013	.019	.891
	Within Groups	177.092	.692		
	Total	177.105			
E12: I uphold the laws and ethical codes	Between Groups	.161	.161	.458	.499

governing the teaching profession.	Within Groups	90.184	.352		
	Total	90.345			
E13: I stay current with the evolving nature of the teaching profession.	Between Groups	.554	.554	.987	.321
	Within Groups	143.524	.561		
	Total	144.078			

Disposition ^a		Sum of Squares	Mean Square	F(1, 256)	Sig.
E14: I engage in discussions about new ideas in the teaching profession.	Between Groups	.430	.430	.765	.383
	Within Groups	143.977	.562		
	Total	144.407			
E15: I engage in research-based teaching practices.	Between Groups	.027	.027	.040	.842
	Within Groups	170.411	.666		
	Total	170.438			
E17: I take initiative to promote ethical and responsible professional practice.	Between Groups	.054	.054	.102	.750
	Within Groups	136.023	.531		
	Total	136.078			
E18: I communicate effectively with students, parents, and colleagues.	Between Groups	1.061	1.061	1.961	.163
	Within Groups	138.551	.541		
	Total	139.612			
E19: I demonstrate and encourage democratic interaction in the classroom and school.	Between Groups	.001	.001	.001	.974
	Within Groups	125.600	.491		
	Total	125.601			
E20: I accurately read the non-verbal communication of students.	Between Groups	.237	.237	.487	.486
	Within Groups	124.573	.487		
	Total	124.810			

Note. Item label E1, E2, E3...=Exhibited disposition. ^an= 258.

Table 15 *Welch Test of Exhibited Professional/Curriculum-centered Disposition by IHE type*

Disposition ^a	Statistic ^b	df1	df2	Sig.
E16: I am successful in facilitating learning for all students.	Welch .595	1	132.521	.442

Note. Item label E16= Exhibited disposition; ^an= 258; ^bAsymptotically F distributed.

Comparison of exhibited dispositions by gender.

Of the 258 respondents, 19.0% (n=49) were male and 81.0% (n=209) were female. In an aggregate review of all 45 exhibited dispositions, the females had a higher mean (4.58, sd=.40) than the males (4.36, sd=.62). In other words, the females identified that they exhibit the dispositions at a higher rate than their male counterparts. Due to unequal sample sizes, a

Levene's test of homogeneity of variance identified a significant difference of 4.21(1, 256), $p=.041$ within the two groups. Therefore the more robust Welch test was used. The Welch test identified a significant difference between males' and females' exhibited dispositions, 5.40 (1, 5.50), $p=.024$.

There was a significant difference between the males and females on 16 of the 45 dispositions. Six of the dispositions with significant difference are in the subset student-centered dispositions.

Exhibited student-centered disposition by gender.

On all twenty-five dispositions on the student-centered subset, the mean was higher for the females than that of the males. The aggregate mean for the females was 4.74 (sd=.389) and the aggregate mean for the males was 4.54 (sd=.691). The overall aggregate mean was 4.70 (sd=.467). Due to a violation of homogeneity of variance within the two groups, a Welch test was used. However, no significant difference was found in an aggregate review of the 25 items in this subset.

A review of individual dispositions in this subset showed the assumption of homogeneity of variance was violated on all but four dispositions. The ANOVA showed no significant difference between the males and females on these four items (See Table 16).

Twenty-one of the student-centered dispositions violated the assumptions of homogeneity of variance. Consequently the more robust Welch test was used. The results of this test can be found in Table 16. Using this more robust test identified six dispositions with significant difference between the males and the females: *I understand students have certain needs that must be met before learning can take place* ($f(1, 54.085) = 5.839, p=.019$), *I am sensitive to student differences* ($f(1, 62.895) = 14.929, p=.000$), *I view teaching as a collaborative effort*

among educators ($f(1, 59.307) = 4.560, p = .037$), *I honor my commitments* ($f(1, 54.834) = 4.040, p = .049$), *I respect the cultures of all students* ($f(1, 58.593) = 3.922, p = .052$), and *I am punctual and reliable in my attendance* ($f(1, 55.005) = 3.911, p = .053$). As mentioned above, in all cases the females exhibited the dispositions at a higher rate than the males.

Table 16 ANOVA of Exhibited Student-centered Dispositions by Gender

Disposition ^a		Sum of Squares	Mean Square	F (1,256)	Sig.
E33: I am patient when working with students.	Between Groups	.185	.185	.396	.530
	Within Groups	119.799	.468		
	Total	119.984			
E34: I am a thoughtful and responsive listener.	Between Groups	.151	.151	.358	.550
	Within Groups	108.252	.423		
	Total	108.403			
E36: I assume responsibility when working with others.	Between Groups	1.323	1.323	3.297	.071
	Within Groups	102.754	.401		
	Total	104.078			
E45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	Between Groups	.452	.452	1.159	.283
	Within Groups	99.846	.390		
	Total	100.298			

Note. E33, E34...=Exhibited dispositions; ^an= 258.

Table 17 Welch Test of Exhibited Student-centered Dispositions by Gender

Disposition ^a		Statistic ^b	df1	df2	Sig.
E21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	Welch	2.878	1	53.475	.096
E22: I believe that all students can learn.	Welch	2.237	1	54.951	.140
E23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	Welch	3.749	1	54.832	.058
E24: I understand students have certain needs that must be met before learning can take place.	Welch	5.839	1	54.085	.019*
E25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	Welch	2.151	1	55.167	.148
E26: I understand that students learn in many different ways.	Welch	2.985	1	53.723	.090
E27: I believe it is important to involve all students in learning.	Welch	3.558	1	56.150	.064
E28: I understand that teachers' expectations impact student learning.	Welch	1.817	1	55.074	.183
E29: I am sensitive to student differences.	Welch	14.929	1	62.895	.000***
E30: I respect the cultures of all students.	Welch	3.922	1	59.357	.052*
E31: I demonstrate qualities of humor, empathy, and warmth with others.	Welch	1.395	1	58.593	.242
E32: I treat students with dignity and respect at all times.	Welch	2.109	1	59.374	.152
E35: I communicate caring, concern, and a willingness to become involved with others.	Welch	3.106	1	59.805	.083

E37: I view teaching as a collaborative effort among educators.	Welch	4.560	1	59.307	.037*
E38: I am open to adjusting and revising my plans to meet student needs.	Welch	1.045	1	61.013	.311

Disposition ^a		Statistic ^b	df1	df2	Sig.
E39: I believe it is important to learn about students and their community.	Welch	3.109	1	56.322	.083
E40: I view teaching as an important profession.	Welch	1.333	1	53.745	.253
E41: I am punctual and reliable in my attendance.	Welch	3.911	1	55.005	.053*
E42: I maintain a professional appearance.	Welch	3.160	1	55.630	.081
E43: I honor my commitments.	Welch	4.040	1	54.834	.049*
E44: I am willing to receive feedback and assessment of my teaching.	Welch	.837	1	56.236	.364

Note. Item labels E21, E22, E23...=exhibited dispositions. ^an= 258; ^bAsymptotically F distributed; * p<.05; ***p<.001

Comparison of exhibited professional/curriculum-centered dispositions by gender.

As with the student-centered dispositions, the females had a higher mean (showed more agreement) for all twenty of the professional/curriculum-centered dispositions than the males. The aggregate mean for the males is 4.14(sd=.569) and the aggregate mean for the females is 4.37(sd=.451). An ANOVA test shows there is a significant difference between the males and females on an aggregate review the exhibited professional/curriculum-centered dispositions, $f(1)=9.69, p=.002$.

Table 18 ANOVA of Exhibited Professional/Curriculum-centered Dispositions by Gender

Disposition ^a		Sum of Squares	Mean Square	F (1,256)	Sig.
E1: I stimulate students' interests.	Between Groups	2.339	2.339	4.771	.030*
	Within Groups	125.506	.490		
	Total	127.845			
E2: I select material that is relevant for students.	Between Groups	4.319	4.319	10.210	.002**
	Within Groups	108.286	.423		
	Total	112.605			
E3: I select material that is interesting for students.	Between Groups	3.675	3.675	7.002	.009**
	Within Groups	134.356	.525		
	Total	138.031			
E4: I create connections to subject matter that are meaningful to students.	Between Groups	4.642	4.642	8.655	.004**
	Within Groups	137.296	.536		
	Total	141.938			
E5: I cooperate with colleagues in planning instruction.	Between Groups	3.801	3.801	4.361	.038*
	Within Groups	223.102	.871		
	Total	226.903			

		Total	226.903			
E10: I provide appropriate feedback to encourage students in their development.	Between Groups	2.339	2.339	4.059	.045*	
	Within Groups	147.506	.576			
	Total	149.845				
Disposition ^a		Sum of Squares	Mean Square	F (1,256)	Sig.	
E11: I actively seek out professional growth opportunities.	Between Groups	5.980	5.980	8.946	.003**	
	Within Groups	171.124	.668			
	Total	177.105				
E12: I uphold the laws and ethical codes governing the teaching profession.	Between Groups	.248	.248	.704	.402	
	Within Groups	90.097	.352			
	Total	90.345				
E13: I stay current with the evolving nature of the teaching profession.	Between Groups	3.576	3.576	6.516	.011*	
	Within Groups	140.501	.549			
	Total	144.078				
E14: I engage in discussions about new ideas in the teaching profession.	Between Groups	.201	.201	.357	.551	
	Within Groups	144.206	.563			
	Total	144.407				
E15: I engage in research-based teaching practices.	Between Groups	1.209	1.209	1.828	.178	
	Within Groups	169.229	.661			
	Total	170.438				
E16: I am successful in facilitating learning for all students.	Between Groups	.807	.807	1.514	.220	
	Within Groups	136.434	.533			
	Total	137.240				
E18: I communicate effectively with students, parents, and colleagues.	Between Groups	2.743	2.743	5.130	.024*	
	Within Groups	136.870	.535			
	Total	139.612				
E19: I demonstrate and encourage democratic interaction in the classroom and school.	Between Groups	.562	.562	1.151	.284	
	Within Groups	125.038	.488			
	Total	125.601				

Note. Item labels E1, E2, E3...=exhibited dispositions; ^an= 258 *p<.05; **p<.01.

A significant difference between the males and females was found on one-half of the dispositions in the professional/curriculum-centered dispositions (see Table 18). One disposition, *I value both long term and short term planning*, Welch (1, 57.424) = 10.811, p=.002, showed significant difference and also violates the assumption of homogeneity of variance. Consequently, the Welch statistic is presented. There were five other dispositions that violated the assumption of homogeneity of variance (see Table 19).

Table 19 *Welch Test of Exhibited Professional/Curriculum-centered Dispositions by Gender*

Disposition ^a		Statistic ^b	df1	df2	Sig.
E6: I value both long term and short term planning.	Welch	10.811	1	57.424	.002**
E7: I listen to colleagues' ideas and suggestions to improve instruction.	Welch	1.212	1	58.458	.276
E8: I work well with others in implementing a common curriculum.	Welch	2.058	1	60.320	.157
E9: I am committed to critical reflection for my professional growth.	Welch	2.060	1	60.941	.156
E17: I take initiative to promote ethical and responsible professional practice.	Welch	1.589	1	62.132	.212
E20: I accurately read the non-verbal communication of students.	Welch	2.149	1	59.238	.148

Note. Item labels E1, E2, E3...=exhibited dispositions; ^an= 258; ^bAsymptotically F distributed; **p<.01.

Comparison of exhibited dispositions by age.

Respondents were asked to indicate age by selecting one of two categories: *25 or younger* or *26 and older*. These categories were selected in hopes of grouping the respondents into those who are traditional college students that went from secondary school directly to college, graduated in four or five years and immediately started teaching. Conversely, those who indicated 26 or older most likely had a minimum of one year of “life experience” other than college. These life experiences contribute to disposition development. 60.5% (n= 156) of the respondents indicated there were in the group 25 years old or younger and 39.5% (n=102) indicated there were in the group 26 years old or older. The aggregate mean of responses of those in the group 25 years-old and younger is 4.55 (sd=.477). The aggregate mean of responses for the older group is 4.52 (sd=.416). There is no significant difference between these two groups when comparing the aggregate responses.

In fact, there are only three dispositions in which there is a significant difference between these two age groups. In all three cases, the age group 25 years old and younger indicated they

exhibit the disposition at a greater rate than the older group. In fact, the young group indicated a higher rate of exhibiting the dispositions on 31 of the 45 items.

Exhibited student-centered dispositions by age.

Only two of the twenty-five student-centered dispositions were found to be significantly different when compared by age. In both cases the assumption of homogeneity of variance is violated. Therefore the Welch f-ratio is presented. They are *I demonstrate qualities of humor, empathy, and warmth with others* (Welch $F(1, 189.575)=5.246, p=.023$) and *I am willing to receive feedback and assessment of my teaching* (Welch $f(1, 191.391)=4.938, p=.027$). Table 20 represents the results of the ANOVA and Table 21 represents the results of the more robust Welch test.

The aggregate mean of the group 25 and younger is 4.72 (sd= .480). The aggregate mean of the group 26 and older is 4.67(sd=.446). The grand mean for this subset is 4.70 (sd=.467). A mean of 5 would suggest 100% respondents indicated they strong agree that they exhibit the disposition. While a mean of one would suggest they strongly disagree that they exhibit the disposition. There is no significant difference between these two groups when comparing the aggregate responses of the exhibited student-centered dispositions.

Table 20 ANOVA of Exhibited Student-centered Dispositions by Age

Disposition ^a		Sum of Squares	Mean Square	F (1,256)	Sig.
E21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	Between Groups	.024	.024	.083	.773
	Within Groups	73.127	.286		
	Total	73.151			
E23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	Between Groups	.262	.262	.976	.324
	Within Groups	68.807	.269		
	Total	69.070			
E24: I understand students have certain needs that must be met before learning can take place.	Between Groups	.174	.174	.520	.472
	Within Groups	85.872	.335		
	Total	86.047			
E26: I understand that students learn in many different	Between Groups	.335	.335	1.151	.284

ways.	Within Groups	74.132	.291		
	Total	74.467			
E27: I believe it is important to involve all students in learning.	Between Groups	.044	.044	.148	.701
	Within Groups	76.653	.299		
	Total	76.698			

Disposition ^a		Sum of Squares	Mean Square	F (1,256)	Sig.
E29: I am sensitive to student differences.	Between Groups	1.431	1.431	2.839	.093
	Within Groups	129.065	.504		
	Total	130.496			
E30: I respect the cultures of all students.	Between Groups	.002	.002	.006	.938
	Within Groups	83.196	.325		
	Total	83.198			
E32: I treat students with dignity and respect at all times.	Between Groups	.073	.073	.149	.700
	Within Groups	125.172	.489		
	Total	125.244			
E34: I am a thoughtful and responsive listener.	Between Groups	.144	.144	.340	.560
	Within Groups	108.259	.423		
	Total	108.403			
E35: I communicate caring, concern, and a willingness to become involved with others.	Between Groups	.354	.354	.878	.350
	Within Groups	103.320	.404		
	Total	103.674			
E36: I assume responsibility when working with others.	Between Groups	.387	.387	.955	.329
	Within Groups	103.691	.405		
	Total	104.078			
E37: I view teaching as a collaborative effort among educators.	Between Groups	.104	.104	.236	.628
	Within Groups	113.136	.442		
	Total	113.240			
E38: I am open to adjusting and revising my plans to meet student needs.	Between Groups	.020	.020	.072	.789
	Within Groups	72.057	.281		
	Total	72.078			
E39: I believe it is important to learn about students and their community.	Between Groups	.233	.233	.632	.427
	Within Groups	94.418	.369		
	Total	94.651			
E40: I view teaching as an important profession.	Between Groups	.259	.259	.879	.349
	Within Groups	75.574	.295		
	Total	75.833			
E42: I maintain a professional appearance.	Between Groups	.211	.211	.640	.424
	Within Groups	83.852	.329		
	Total	84.062			
E43: I honor my commitments.	Between Groups	.488	.488	1.478	.225
	Within Groups	84.612	.331		
	Total	85.101			

Note. Item labels E1, E2, E3...=exhibited dispositions; ^an= 258.

Table 21 *Welch Test of Exhibited Student-centered Dispositions by Age*

Disposition ^a		Statistic ^b	df1	df2	Sig.
E22: I believe that all students can learn.	Welch	1.909	1	203.780	.169
E25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	Welch	2.902	1	227.390	.090
E28: I understand that teachers' expectations impact student learning.	Welch	2.221	1	214.069	.138
E31: I demonstrate qualities of humor, empathy, and warmth with others.	Welch	5.246	1	189.575	.023*
E33: I am patient when working with students.	Welch	.691	1	251.175	.407
E41: I am punctual and reliable in my attendance.	Welch	2.137	1	189.735	.145
E44: I am willing to receive feedback and assessment of my teaching.	Welch	4.938	1	191.391	.027*
E45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	Welch	1.995	1	187.767	.159

Note. Item labels E1, E2, E3...=exhibited dispositions. ^an= 258; ^bAsymptotically F distributed; *p<.05.

Comparison of exhibited professional/curriculum-centered dispositions.

There is no significant difference between the group 25 years-old or younger and the group 26 years-old or older when reviewing the aggregate responses of the subset professional/curriculum-centered dispositions. Only one of the twenty professional/curriculum-centered dispositions shows significant difference between the two age groups. It is *I cooperate with colleagues in planning instruction* ($f(1, 256) = 7.515, p = .007$). The group 25 or younger (mean = 4.48) indicated they exhibit this disposition more than the group 26 or older (mean = 4.16) (See Table 22).

Only one disposition in this subset was found to violate the assumptions of homogeneity of variance. These data are presented in Table 23.

Table 22 ANOVA of Exhibited Professional/Curriculum-centered Dispositions by Age

Disposition ^a		Sum of Squares	Mean Square	F (1,256)	Sig.
E1: I stimulate students' interests.	Between Groups	.133	.133	.266	.607
	Within Groups	127.712	.499		
	Total	127.845			
E2: I select material that is relevant for students.	Between Groups	.505	.505	1.153	.284
	Within Groups	112.100	.438		
	Total	112.605			
E3: I select material that is interesting for students.	Between Groups	.007	.007	.013	.910
	Within Groups	138.024	.539		
	Total	138.031			
E4: I create connections to subject matter that are meaningful to students.	Between Groups	.505	.505	.914	.340
	Within Groups	141.433	.552		
	Total	141.938			
E5: I cooperate with colleagues in planning instruction.	Between Groups	6.471	6.471	7.515	.007**
	Within Groups	220.433	.861		
	Total	226.903			
E6: I value both long term and short term planning.	Between Groups	.265	.265	.540	.463
	Within Groups	125.847	.492		
	Total	126.112			
E7: I listen to colleagues' ideas and suggestions to improve instruction.	Between Groups	.195	.195	.419	.518
	Within Groups	119.046	.465		
	Total	119.240			
E8: I work well with others in implementing a common curriculum.	Between Groups	1.784	1.784	2.729	.100
	Within Groups	167.317	.654		
	Total	169.101			
E9: I am committed to critical reflection for my professional growth.	Between Groups	.379	.379	.900	.344
	Within Groups	107.873	.421		
	Total	108.252			
E10: I provide appropriate feedback to encourage students in their development.	Between Groups	1.576	1.576	2.722	.100
	Within Groups	148.268	.579		
	Total	149.845			
E11: I actively seek out professional growth opportunities.	Between Groups	1.194	1.194	1.738	.189
	Within Groups	175.911	.687		
	Total	177.105			
E13: I stay current with the evolving nature of the teaching profession.	Between Groups	.424	.424	.756	.385
	Within Groups	143.653	.561		
	Total	144.078			
E14: I engage in discussions about new ideas in the teaching profession.	Between Groups	.678	.678	1.207	.273
	Within Groups	143.729	.561		
	Total	144.407			

		Total			
E15: I engage in research-based teaching practices.	Between Groups	1.438	1.438	2.179	.141
	Within Groups	169.000	.660		
	Total	170.438			
E16: I am successful in facilitating learning for all students.	Between Groups	.195	.195	.364	.547
	Within Groups	137.046	.535		
	Total	137.240			

Disposition ^a		Sum of Squares	Mean Square	F (1,256)	Sig.
E17: I take initiative to promote ethical and responsible professional practice.	Between Groups	.607	.607	1.146	.285
	Within Groups	135.471	.529		
	Total	136.078			
E18: I communicate effectively with students, parents, and colleagues.	Between Groups	.413	.413	.759	.384
	Within Groups	139.199	.544		
	Total	139.612			
E19: I demonstrate and encourage democratic interaction in the classroom and school.	Between Groups	.037	.037	.076	.784
	Within Groups	125.564	.490		
	Total	125.601			
E20: I accurately read the non-verbal communication of students.	Between Groups	.001	.001	.002	.966
	Within Groups	124.809	.488		
	Total	124.810			

Note. Item labels E1, E2, E3...=exhibited dispositions; ^an= 258 **p<.01.

Table 23 *Welch Test of Exhibited Professional/Curriculum-centered Dispositions by Age*

Disposition ^a		Statistic ^b	df1	df2	Sig.
E12: I uphold the laws and ethical codes governing the teaching profession.	Welch	2.319	1	208.994	.129

Note. Item labels E1, E2, E3...=exhibited dispositions; ^an= 258; ^bAsymptotically F distributed;

Perception that dispositions were taught.

The second half of the analysis of Question Three is the comparison of the perception that the respondents were taught these dispositions while in college or at the university. As with the previous analysis, the comparisons were done by college or university type, by gender, and by age. Because the possible responses were *yes* or *no*, a dichotomous pair, the chi square test was used to analyze the data. When the assumption of expected frequencies of 5 or more was violated, Fisher's exact test is reported (Field, 2009).

Comparison of perception of taught dispositions by IHE type.

Seventy-six percent (n=197) of the respondents were from large universities and 24 % (n=61) were from small, private colleges and universities. Overall, the respondents from the large, public institutions perceive they were taught the student-centered dispositions at a slightly higher rate than those from the small, private institutions. The aggregate mean of the responses from graduates from the large, public universities is 1.11 and the aggregate mean of the responses from graduates from the small, private institutions is 1.14. The grand mean is 1.11. A mean of 1 would indicate 100% of respondents perceived they were taught the dispositions, while a mean of 2.0 would indicate all respondents perceived they were not taught the dispositions. An aggregate review of all responses shows no significant difference between the graduates from the large, public universities and the graduates from the small, private colleges and universities.

Eight of the 45 dispositions showed a significant difference between the two groups. For these dispositions, the respondents who graduated from the large, public universities indicated they perceived they were taught the dispositions at a higher rate than their counterparts from the small, private colleges and universities (see Table 24).

Table 24 *Chi Square or Fisher Test of Perceived Taught Dispositions by IHE Type*

Disposition	Value	df	p
T1: I stimulate students' interests.	.406	1	.524
T2: I select material that is relevant for students.	4.430	1	.035*
T3: I select material that is interesting for students.	3.382	1	.066
T4: I create connections to subject matter that are meaningful to students.	2.341	1	.126
T5: I cooperate with colleagues in planning instruction.	.388	1	.533
T6: I value both long term and short term planning.	.276	1	.599
T7: I listen to colleagues' ideas and suggestions to improve instruction.	2.540	1	.111
T8: I work well with others in implementing a common curriculum.	1.997	1	.158
T9: I am committed to critical reflection for my professional growth.	0.000 ^a	1	1.000
T10: I provide appropriate feedback to encourage students in their development.	4.049	1	.044*
T11: I actively seek out professional growth opportunities.	1.583	1	.208
T12: I uphold the laws and ethical codes governing the teaching profession.	6.128 ^a	1	.013*
T13: I stay current with the evolving nature of the teaching profession.	4.257	1	.039*
T14: I engage in discussions about new ideas in the teaching profession.	.172	1	.678
T15: I engage in research-based teaching practices.	1.928	1	.165

T16: I am successful in facilitating learning for all students.	.087	1	.768
T17: I take initiative to promote ethical and responsible professional practice.	4.421 ^a	1	.035*
T18: I communicate effectively with students, parents, and colleagues.	.698	1	.403
T19: I demonstrate and encourage democratic interaction in the classroom and school.	.000	1	.986
T20: I accurately read the non-verbal communication of students.	.819	1	.365
T21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	.265 ^a	1	.607
T22: I believe that all students can learn.	1.690 ^a	1	.194
Disposition	Value	df	p
T23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	0.000 ^a	1	1.000
T24: I understand students have certain needs that must be met before learning can take place.	.310 ^a	1	.578
T25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	.094 ^a	1	.759
T26: I understand that students learn in many different ways.	0.000 ^a	1	1.000
T27: I believe it is important to involve all students in learning.	4.421 ^a	1	.035*
T28: I understand that teachers' expectations impact student learning.	6.835 ^a	1	.009**
T29: I am sensitive to student differences.	.004	1	.947
T30: I respect the cultures of all students.	2.847	1	.092
T31: I demonstrate qualities of humor, empathy, and warmth with others.	.463	1	.496
T32: I treat students with dignity and respect at all times.	1.257	1	.262
T33: I am patient when working with students.	.048	1	.827
T34: I am a thoughtful and responsive listener.	.661	1	.416
T35: I communicate caring, concern, and a willingness to become involved with others.	.249	1	.617
T36: I assume responsibility when working with others.	.202	1	.653
T37: I view teaching as a collaborative effort among educators.	.626	1	.429
T38: I am open to adjusting and revising my plans to meet student needs.	.190 ^a	1	.663
T39: I believe it is important to learn about students and their community.	1.257	1	.262
T40: I view teaching as an important profession.	.257 ^a	1	.612
T41: I am punctual and reliable in my attendance.	.077 ^a	1	.782
T42: I maintain a professional appearance.	.190 ^a	1	.663
T43: I honor my commitments.	.447	1	.504
T44: I am willing to receive feedback and assessment of my teaching.	0.000 ^a	1	1.000
T45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	0.000 ^a	1	1.000

Note. Item labels T1, T2, T3...=perceived taught dispositions; ^aFisher's exact test used; *p<.05; **p<.01; n= 258.

Perception of taught student-centered dispositions compared by IHE type.

The aggregate mean of responses from the respondents from the large, public universities is 1.08; 1.09 for the respondents from the small, private colleges and universities. The grand mean for this subset is 1.09.

Of the 25 student-centered dispositions in this subset, only two cases identified significant difference between those from the large, public universities and the small, private

colleges and universities. The dispositions are *I believe it is important to involve all students in learning* $\chi^2(1) = 4.421, p=.035$ and *I understand that teachers' expectations impact student learning* $\chi^2(1) = 6.835, p=.009$. Both dispositions violated the assumption of at least five expected cases in each sample. Consequently, the more robust Fisher's test is reported. (See Table 24.) Significantly more respondents from the large, public universities indicated they were taught these dispositions than those from the small, private colleges and universities. Based on the odds ratio, graduates from large universities are 4.19 times and 3.67 times, respectively, more likely to report being taught these two dispositions than those from small private institutions.

Interestingly, the descriptive statistics revealed 100% of the respondents from the small colleges perceive they were taught the disposition *I believe that all students can learn*.

Although there is significant difference between the groups on two dispositions, it is interesting to note that the respondents from the large, public universities indicated they were taught the student-centered dispositions more than their counterparts on 15 of the 25 items. Conversely, the respondents from the small, public colleges and universities indicated they were taught ten of the dispositions at a higher rate than the others. An aggregate review of all responses in this subset showed no significant difference.

Perception of taught professional/curriculum-centered dispositions compared by IHE type.

Five of the 20 dispositions in this subset were identified as significant. The graduates from the small, private colleges and universities indicated they perceive they were not taught these dispositions as much as those who graduated from the large, public institutions (See Table 24).

The aggregate mean of responses for graduates from the large, public universities is 1.14 (n=197). The aggregate mean of responses from respondents from the small, private colleges and universities is 1.19 (n=61). A mean closer to one indicates more respondents perceive they were taught the selected disposition by the college or university from which they graduated. Although there was no significant difference in an aggregate review of responses in this subset, for the most part, the graduates from the large, public universities perceive they were taught these selected dispositions more than the graduates of the small, private institutions. On only two dispositions, *I am committed to critical reflection for my professional growth* and *I communicate effectively with students, parents, and colleagues*, did the graduates from the small, private institutions perceive they were taught the disposition more than their counterparts at the large, public universities.

Comparison of perception of taught dispositions by gender.

Nineteen percent (n=49) of the respondents were male and 81% (n=209) were female. As mentioned above, a one (1) indicates *yes, I feel I was taught this disposition* and a two (2) indicates the respondent perceived he/she was not taught the disposition. Overall, the males indicated they perceived they were taught the student-centered dispositions at a higher rate than the females. The grand mean for the males was 1.09 and the 1.12 for the females. The overall grand mean was 1.11. An aggregate review of all responses on all 45 dispositions identified no significant difference between the males and the females.

A disaggregated review identifies only two dispositions in which there is a significant difference between the male and female respondents. One is found in each subset. For both of these dispositions the males perceived they were taught them at a higher rate than the females. In

fact, on only nine of the 45 dispositions did the females indicate they perceived they were taught the dispositions at a higher rate than the males.

Table 25 *Chi Square and Fisher Test of Perception of Taught Dispositions by Gender*

Disposition	Value	df	p
T1: I stimulate students' interests.	0.197	1	0.657
T2: I select material that is relevant for students.	3.602	1	0.058
T3: I select material that is interesting for students.	1.297	1	0.255
T4: I create connections to subject matter that are meaningful to students.	0.448 ^a	1	0.503
T5: I cooperate with colleagues in planning instruction.	0.198	1	0.657
T6: I value both long term and short term planning.	0.418	1	0.518
T7: I listen to colleagues' ideas and suggestions to improve instruction.	4.64	1	0.031*
Disposition	Value	df	p
T8: I work well with others in implementing a common curriculum.	0.46	1	0.498
T9: I am committed to critical reflection for my professional growth.	0.662 ^a	1	0.416
T10: I provide appropriate feedback to encourage students in their development.	0.722	1	0.395
T11: I actively seek out professional growth opportunities.	2.552	1	0.110
T12: I uphold the laws and ethical codes governing the teaching profession.	0.195 ^a	1	0.659
T13: I stay current with the evolving nature of the teaching profession.	1.399	1	0.237
T14: I engage in discussions about new ideas in the teaching profession.	0.707	1	0.401
T15: I engage in research-based teaching practices.	1.652 ^a	1	0.199
T16: I am successful in facilitating learning for all students.	0.342	1	0.559
T17: I take initiative to promote ethical and responsible professional practice.	0.104 ^a	1	0.747
T18: I communicate effectively with students, parents, and colleagues.	0.351	1	0.554
T19: I demonstrate and encourage democratic interaction in the classroom and school.	2.526	1	0.112
T20: I accurately read the non-verbal communication of students.	0.002	1	0.961
T21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	0.871 ^a	1	0.351
T22: I believe that all students can learn.	0.033 ^a	1	0.856
T23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	0.108 ^a	1	0.743
T24: I understand students have certain needs that must be met before learning can take place.	0.004 ^a	1	0.947
T25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	0.030 ^a	1	0.862
T26: I understand that students learn in many different ways.	0.268 ^a	1	0.605
T27: I believe it is important to involve all students in learning.	0.00 ^a	1	1.000
T28: I understand that teachers' expectations impact student learning.	0.031 ^a	1	0.859
T29: I am sensitive to student differences.	0.061	1	0.805
T30: I respect the cultures of all students.	0.454 ^a	1	0.501
T31: I demonstrate qualities of humor, empathy, and warmth with others.	0.695	1	0.405
T32: I treat students with dignity and respect at all times.	1.399	1	0.237
T33: I am patient when working with students.	1.79	1	0.181
T34: I am a thoughtful and responsive listener.	2.401	1	0.121
T35: I communicate caring, concern, and a willingness to become involved with others.	5.74	1	0.017*
T36: I assume responsibility when working with others.	2.632	1	0.105
T37: I view teaching as a collaborative effort among educators.	0.004 ^a	1	0.949
T38: I am open to adjusting and revising my plans to meet student needs.	0.126 ^a	1	0.723
T39: I believe it is important to learn about students and their community.	0.026	1	0.871
T40: I view teaching as an important profession.	1.103 ^a	1	0.294
T41: I am punctual and reliable in my attendance.	2.056 ^a	1	0.152
T42: I maintain a professional appearance.	1.025 ^a	1	0.311
T43: I honor my commitments.	1.265 ^a	1	0.261

T44: I am willing to receive feedback and assessment of my teaching.	0.000 ^a	1	0.986
T45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	0.746 ^a	1	0.388

Note. Item labels T1, T2, T3...=perceived taught dispositions; ^aFisher's exact test used; *p<.05; n= 258.

Perception of taught student-centered dispositions by gender.

The aggregate mean of the responses of the males on this subset is 1.05 (sd=.11). The aggregate mean of the females is 1.09 (sd=.18). An aggregate review of dispositions in this subset revealed no significant difference between these two groups. There is only one disposition on which there was a significant difference in this subset; *I communicate caring, concern, and a willingness to become involved with others* $\chi^2(1)= 5.74, p=.017$. (See Table 25.)

Perception of taught professional/curriculum-centered dispositions by gender

The only disposition found to be statistically significant in the professional/curriculum-centered disposition subset is *I listen to colleagues' ideas and suggestions to improve instruction* $\chi^2(1)= 4.64, p=.031$. The aggregate mean of responses by males for this subset is 1.12 (sd=.14). The aggregate mean of responses by the females in the subset is 1.16 (sd=.14). There is no significant statistical difference between the two genders in an aggregate review of this subset.

Comparison of perception of taught dispositions by age.

Sixty point five percent (n=156) of the respondents indicated they belong to the category of *25-years-old or younger*. Conversely, 39.5% (n=102) indicated they were *26-years-old or older*. As mentioned earlier, the age groups were identified in an effort to separate the respondents into two groups; those who went through a traditional four to five year teacher education program and then directly into teaching and those who had a minimum of one year's life experience before entering the classroom. No attempt was made to try to determine what

these experiences were. The assumption is made that these other life experiences affect the development of dispositions.

An aggregate review of the responses to all 45 dispositions reveals there is no significant difference between the two age groups. In fact, only one of the 45 dispositions was determined to have a significant difference between the two age groups. In this one case, the group *26 years old or older* indicated they were taught the disposition at a higher rate than the other group. (See Table 26.)

Table 26 *Chi Square and Fisher Tests of Perception of Taught Dispositions by Age*

Disposition	Value	df	p
T1: I stimulate students' interests.	1.989	1	.158
T2: I select material that is relevant for students.	0.085	1	.771
T3: I select material that is interesting for students.	1.8	1	.180
T4: I create connections to subject matter that are meaningful to students.	0.145	1	.704
T5: I cooperate with colleagues in planning instruction.	0.031	1	.859
T6: I value both long term and short term planning.	0.361	1	.548
T7: I listen to colleagues' ideas and suggestions to improve instruction.	0.467	1	.494
T8: I work well with others in implementing a common curriculum.	0.042	1	.838
T9: I am committed to critical reflection for my professional growth.	0.021	1	.886
T10: I provide appropriate feedback to encourage students in their development.	0.683	1	.409
T11: I actively seek out professional growth opportunities.	0.379	1	.538
T12: I uphold the laws and ethical codes governing the teaching profession.	4.574	1	0.032*
T13: I stay current with the evolving nature of the teaching profession.	0.001	1	.977
T14: I engage in discussions about new ideas in the teaching profession.	0.117	1	.733
T15: I engage in research-based teaching practices.	0.293	1	.588
T16: I am successful in facilitating learning for all students.	0.018	1	.892
T17: I take initiative to promote ethical and responsible professional practice.	0.000 ^a	1	1.000
T18: I communicate effectively with students, parents, and colleagues.	0.001	1	.972
T19: I demonstrate and encourage democratic interaction in the classroom and school.	1.017	1	.313
T20: I accurately read the non-verbal communication of students.	0.421	1	.516
T21: I believe a teacher must use a variety of instructional strategies to optimize student learning.	2.948 ^a	1	.086
T22: I believe that all students can learn.	0.002 ^a	1	.968
T23: I believe the classroom environment a teacher creates greatly affects students' learning and development.	0.130 ^a	1	.718
T24: I understand students have certain needs that must be met before learning can take place.	0.057	1	.812
T25: I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	0.137	1	.711
T26: I understand that students learn in many different ways.	1.980 ^a	1	.159
T27: I believe it is important to involve all students in learning.	0.009 ^a	1	.924
T28: I understand that teachers' expectations impact student learning.	0.002	1	.965
T29: I am sensitive to student differences.	0.349	1	.555
T30: I respect the cultures of all students.	0.062	1	.803
T31: I demonstrate qualities of humor, empathy, and warmth with others.	1.017	1	.313
T32: I treat students with dignity and respect at all times.	0.624	1	.429
T33: I am patient when working with students.	0.728	1	.394
T34: I am a thoughtful and responsive listener.	0.073	1	.787

T35: I communicate caring, concern, and a willingness to become involved with others.	0.022	1	.882
T36: I assume responsibility when working with others.	0.044	1	.834
T37: I view teaching as a collaborative effort among educators.	1.645	1	.200
T38: I am open to adjusting and revising my plans to meet student needs.	0.127	1	.722
T39: I believe it is important to learn about students and their community.	0.624	1	.429
T40: I view teaching as an important profession.	0.000 ^a	1	1.000
T41: I am punctual and reliable in my attendance.	2.731	1	.098
T42: I maintain a professional appearance.	1.994	1	.158
T43: I honor my commitments.	0.05	1	.823
T44: I am willing to receive feedback and assessment of my teaching.	0.965 ^a	1	.326
T45: I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	0.625	1	.429

Note. Item labels T1, T2, T3...=perceived taught dispositions; ^aFisher's exact test used; *p<.05; n= 258.

Perception of taught student-centered dispositions by age.

There is no significant difference identified in an aggregate comparison of the respondents' perception of being taught the twenty-five student-centered dispositions.

Furthermore, there was no significant difference observed on any of the individual dispositions associated with this subset.

Perception of taught professional/curriculum-centered by age.

Significantly more participants in the group 26-years-old or older indicated they perceive they were taught the disposition *I uphold the laws and ethical codes governing the teaching profession* ($\chi^2(1) = 4.574, p = .032$). As previously mentioned, this is the only disposition with a significant difference when comparing respondents grouped by age. An aggregate comparison of the responses of the 20 professional/curriculum-centered dispositions showed no significant difference between the two age groups.

Summary

The results presented above clearly indicate that first-year teachers perceive they exhibit and were taught the listed teacher dispositions at a high rate. However, the only observed significant difference when looking at aggregate reviews of the dispositions is that the females exhibit the dispositions at a significantly higher rate than the males. Drilling down to the

individual dispositions does reveal some additional significant differences. These significant differences and a discussion of the findings will be explored in more detail in the next chapter.

Chapter 5 - Summary, Observations, and Conclusions

This final chapter serves as a summary of the dissertation. The research problem is provided along with a review of the methodology. The majority of this chapter is a summary of the findings and a discussion of implications.

Statement of the problem

This study was designed to identify the extent to which first-year teachers' self-reported dispositions differ according to college or university type, age and gender. Additionally, it identifies the extent to which these same teachers perceive they were taught these dispositions by the teacher education program from which they graduated.

Three research questions were used to explore this topic.

- 1) To what extent do novice teachers self-report that they exhibit positive teacher dispositions?
- 2) To what extent do novice teachers perceive they were taught these same dispositions?
- 3) Do graduates of small, private, church affiliated Institutions of Higher Education (IHEs) display the assessed dispositions at the same rate as graduates of large, public, secular universities?

Review of Methodology

An online survey of 45 positive teacher dispositions was distributed to 648 first-year teachers in a Midwestern state. The survey, based on the Teacher Disposition Index (TDI) (Schulte, et al., 2004), asked respondents to indicate the extent to which they felt they exhibited the dispositions on a five point Likert-type scale from "strongly disagree" to "strongly agree." For each disposition they were also asked to indicate "yes" or "no" if they felt the teacher

education program from which they graduated taught the disposition or not. Results were analyzed using frequency distributions, ANOVAs, and chi square tests.

Summary of the Results

Question 1. *To what extent do novice teachers self-report that they exhibit positive teacher dispositions?* Overall, the first year teachers indicated they exhibited the listed dispositions. A cumulative review of all 45 dispositions shows 93.6% of responses were positive for “agree” or “strongly agree” that they exhibit the dispositions. The survey was divided into two subsets, as determined by the TDI; 25 student-centered dispositions and 20 professional/curriculum-centered dispositions. The percentage of those who agreed or strongly agreed that they exhibit the dispositions from the student-centered subset was 97.0%. Those agreeing or strongly agreeing that they exhibit the professional/curriculum-centered dispositions was 89.3%. When the 45 dispositions are ranked in order of most agreement to least, all but one of the top 22 dispositions are part of the student-centered subset. Conversely, all but four of the bottom 23 dispositions are from the professional/curriculum-centered subset.

Question 2. *To what extent do novice teachers perceive they were taught these same dispositions?* In general, the respondents perceive the colleges or universities from which they graduated as having taught the selected dispositions. A cumulative review of all 45 dispositions shows that 88.51% of responses were positive for teaching the dispositions. The responses indicated a higher level agreement with the student-centered dispositions (91.31%) than the professional/curriculum-centered dispositions (85.02%).

Question 3. Research question three compares responses of participants from large, public universities to responses of participants from smaller, private colleges and universities. *Do graduates of small, private, church affiliated Institutions of Higher Education (IHEs) display*

the assessed dispositions at the same rate as graduates of large, public, secular universities? In addition to presenting this specific information, data comparing the gender and age of respondents is also reviewed.

Overall, there was no significant difference identified between the graduates of large, public universities and small, private colleges and universities. This is true of the exhibited dispositions and the perception of being taught the dispositions. In fact there were no significant differences found on any of the aggregated tests including comparing gender and age. When drilling down to specific dispositions an occasional significant difference was identified. Where there are significant differences, they do not seem to cluster around any particular areas. More detailed observations of the results are included in the next section.

Observations and analysis

The number of statistically significant results identified in chapter four is limited. However, some general observations can still be drawn. Consequently, this section of chapter five is arranged by first reviewing the data from the frequency distributions of the exhibited dispositions and perceived instruction of dispositions and then by reviewing the comparative data aligned to research question three.

Frequency distribution of exhibited dispositions.

Three key findings are observable when reviewing the frequency distribution of the exhibited dispositions. First, the frequency of exhibited dispositions data are skewed to show high agreement with these dispositions. Second, the student-centered dispositions are ranked higher than the professional/curriculum-centered dispositions. Finally, there does not appear to be any clusters of data that can be further analyzed. For example the two dispositions related to planning are ranked fourth, *I am open to adjusting and revising my plans to meet student needs,*

and twenty-sixth, *I value both long term and short term planning* (see Table 7, p. 69). These three findings will be explored in more depth.

As previously mentioned, the respondents overwhelmingly indicated exhibiting the selected dispositions. Overall, 93% of respondents felt they “agree” or “strongly agree” that they exhibit the dispositions. The skew in these data could be attributed to the fact that the results are self-reported. The first-year teacher respondents are certainly confident in their dispositions. Are the first-year teachers really as good as they claim to be, or do they have an inflated sense of ability? Further research could include triangulation of data such as asking supervisors to also identify the exhibited dispositions of new teachers to see if the self-reported dispositions are validated by the new teachers’ supervisors.

Respondents indicated they exhibited dispositions identified with the student-centered subset of more than with the professional/curriculum-centered subset (see Table 6, p. 68). It appears that novice teachers are concerned more with the needs of their students than with their own professional development. This focus on students over personal professional development could be related to the new teachers’ professional developmental level.

Wong and Wong (1991) and Sadker and Zittleman (2009) both identify four stages of teacher development. Wong and Wong (1991) name the stages fantasy, survival, mastery, and impact. Sadker and Zittleman’s (2009) four levels of teacher development are survival, consolidation, renewal, and maturity. New teachers, according to the data of exhibited dispositions tend to be in one of two stages of professional development. They are either at the Wongs’ fantasy stage—they are going to make a difference in the world, or at the survival stage (Sadker & Zittleman, 2009; Wong & Wong, 1991) —what can I do to help my students and keep

my job. A teacher at the survival level is characterized as being only one step ahead of the students and hoping all the students will like what is being done in the classroom.

As novice teachers, they do not appear as concerned about professional development to enhance themselves or the profession, but rather exhibit the dispositions to help students and to help themselves to get through the day, month, and year. As further evidence of the lower stages of teacher development, the novice teachers appear to be more focused on self than on collaboration. Three dispositions clustered around collaboration are in the bottom half of the ranking (see Table 7, p. 69).

Further analysis is challenging since no clear sets of similar dispositions appear in the data. However, there is evidence to draw some tentative conclusions.

Novice teachers seem to be more aware of theory than confident in practice. Many of the dispositions ranked high in Table 7 (p. 69) are belief statements or theoretical statements. A sampling of these dispositions (with rank) is as follows. *I believe a teacher must use a variety of instructional strategies to optimize student learning (1), I believe the classroom environment a teacher creates greatly affects students' learning and development (1), I understand that students learn in many different ways(4), I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence (7), I understand that teachers' expectations impact student learning(7), I believe it is important to learn about students and their community(7), I view teaching as an important profession(11) and I believe it is important to involve all students in learning(12).* However, the dispositions directly related to application are ranked much lower on the same scale. A sampling is below. *I select material that is relevant for students (28), I am sensitive to student differences (29), I select material that is interesting for students (42), and I am successful in facilitating learning for all students (44).*

This could be a lack of confidence in the first-year teachers, ignorance of the importance of dispositions or naiveté. They report they exhibit the beliefs and understanding, but not as much the application. As new teachers they may believe they have a solid basis on the theories they have been taught, but are still developing necessary methodologies to make the theories applicable to the everyday operations of their classrooms.

As mentioned in the review of literature, there is no clear definition of the construct of teacher dispositions. Although this study does not specifically attempt to address this dilemma, it was hoped that a local (state-wide) definition could possibly be refined simply on the basis that we know what the core exhibited dispositions are. In other words, we have no stated definition, but we do know which dispositions the teachers exhibit, therefore, we indirectly know which dispositions are at least perceived as important—since they are exhibited. However, with no obvious clusters of dispositions appearing and all 45 dispositions appearing to be considered important, it is difficult to make this claim. Further research could include a broader study of exhibited dispositions in order to help define the construct as well as an investigation into the existing language concerning dispositions.

Frequency distribution of perceived taught dispositions.

Again a general observation is that the data are skewed and the majority of first-year teachers perceive that they are taught most dispositions. The state in which this study was conducted is a partnership state with NCATE and, consequently, all teacher education programs in the state have sought NCATE (re)accreditation. To meet the NCATE standards the colleges and universities are required to assess (and presumably teach) dispositions of teacher education candidates. Based on the responses to this survey, respondents believe they are being taught dispositions. However, this does not at all suggest these dispositions are the same ones each

individual institution claims to teach and therefore does not help with accreditation visits. But at least the candidates perceive they are being taught the identified dispositions.

Just as with exhibited dispositions, the dispositions identified in the subset of student-centered are perceived to be taught more than the professional/curriculum-centered dispositions (see Table 8, p. 71). However, participants indicated they were taught the dispositions at a lower rate than they exhibit the dispositions. It could be that they believe they exhibit some of the dispositions and were never taught them. Or that the dispositions were innate parts of their personalities and thus did not need to be taught.

As with the exhibited dispositions, further analysis is challenging as there was little clustering of specific groups of dispositions. One apparent clustering is that of the two lowest ranking dispositions. They are: *I communicate effectively with students, parents and colleagues* and *I accurately read the non-verbal communication of students* (see Table 9, p. 72). These responses suggest colleges and universities could teach more communications skills or possibly require an interpersonal communications course as part of the required curriculum.

The two dispositions ranked the highest for perception of being taught are: *I understand that students learn in many different ways* and *I believe a teacher must use a variety of instructional strategies to optimize student learning* (see Table 9, p.72). These data certainly seem to suggest colleges and universities teach about various learning styles.

Analyses mentioned in the previous section suggests no refinement of the construct of dispositions by way of exhibited dispositions. Another possible way to define the construct is to assume that colleges and universities teach what they believe is important. Thereby, the construct is defined by what is taught. Following this logic, dispositions are more defined as awareness of different learning styles and not defined by interpersonal communication skills.

Any further refinement of the construct is hindered due to the lack of clustering of perceived taught dispositions.

Comparison by IHE type.

Overall no significant difference was found between the respondents from the small, private colleges and universities and the respondents from the large, public universities for both exhibited dispositions and perception of taught dispositions in aggregate reviews of the 45 dispositions and in the two subsets. For that matter, only one significant difference was found in reviewing the specific exhibited dispositions. Reviewing the perceived taught dispositions identified significant differences on seven of the 45 dispositions.

The one exhibited dispositions with a significant difference is *I believe that all students can learn* (Welch $f(1, 211.635) = 4.527, p = .035$). The respondents from the smaller institutions claim to exhibit this at a higher rate than those from the large institutions. Interestingly, 100% of the respondents from the small institutions reported they were taught this disposition. On 24 of the dispositions the respondents from the large institutions had a higher mean and, conversely, on 21 (including *I believe that all students can learn*) the respondents from the small institutions had a higher mean. Essential there is an even split between to two groups in exhibited dispositions.

Analyzing the perceived taught dispositions reveals seven items with significant difference (see Table 25, p. 94). They are: *I select material that is relevant for students* ($p = .035$), *I provide appropriate feedback to encourage students in their development* ($p = .044$), *I uphold the laws and ethical codes governing the teaching profession* ($p = .013$), *I stay current with the evolving nature of the teaching profession* ($p = .039$), *I take initiative to promote ethical and responsible professional practice* ($p = .035$), *I believe it is important to involve all student in*

learning ($p=.035$), and *I understand that teachers' expectations impact student learning* ($p=.009$). Two of these dispositions cluster around the topic of ethics, otherwise, the rest seem to have no relationship. For all seven dispositions with a significant difference, the respondents from large institutions indicated they were taught the dispositions at a higher rate than the respondents from the small institutions.

Baldwin's (2007) findings support this notion that the large institutions teach the dispositions at a higher rate. She found that the large university tended to be more overt in the teaching of dispositions. Conversely, at the smaller, private institutions, the dispositions were less overtly taught. In some cases at small institutions the dispositions were taught via service learning trips, modeling, and interaction with professors who exhibited the dispositions. At the large university, the dispositions were presented in more classes. In a few rare instances some institutions have developed specialized courses dedicated to the instruction of dispositions. Her research identified that dispositions are most commonly taught informally by faculty in private conferencing or integrated into existing classes.

Taking Baldwin's (2007) claim regarding the more overt teaching of dispositions at the larger universities may explain why the graduates of the large universities perceive they were taught the dispositions at a higher rate. Although this study did not explore *how* dispositions are taught, it is evident that, overall, the respondents report they are being taught the dispositions. Maybe, as Schussler, Bercaw, and Stooksberry (2008) suggest, the *how* is not important, but simply that future teachers are exposed to appropriate dispositions is what is critical. Baldwin (2007) concludes that preservice teachers would like to see more modeling and assistance by professors as two techniques to teach dispositions, so additional research in this area might be justified.

Comparison by gender of respondent.

The validation and reliability study of the TDI used as the basis for this study identified no significant differences between male and female respondents (Schulte, Edick, Edwards, & Mackiel, 2004). However, the results of this study identified a number of significant differences between the responses of the males and females.

About two-thirds of the respondents were female; one-third male. In general, the females reported that they exhibit the dispositions at a significantly higher rate ($p=.024$) than the males. An aggregate review of the student-centered dispositions showed no significant difference, but there was a significant difference on six of the 25 dispositions in this subset.

An aggregate review of the professional/curriculum-centered dispositions subset showed a significant difference ($p=.002$). In fact there was significant difference between the females and males on one-half of exhibited the dispositions of this subset (see Tables 19, p. 86 and 20, p. 88).

Despite the large number of significant differences identified in the exhibited dispositions, there were very few identified differences in the perception of taught dispositions. There were no significant differences found in an aggregate review of all 45 taught dispositions or in aggregate reviews of the two subsets. Only on the individual dispositions *I listen to colleagues' ideas and suggestions to improve instruction* ($p=0.031$) and *I communicate caring, concern, and a willingness to become involved with others* ($p= 0.017$) was there a significant difference in perception of being taught the disposition. In both cases, the males indicated they were taught these dispositions at a higher rate than the females. In fact, the males indicated they were taught the dispositions at a higher rate than the females on 36 of the 45 dispositions. In short, the females seem to exhibit the dispositions significantly more than the males, but despite

a lack of significant difference, the males report they were taught dispositions at a higher rate than the females.

Could this simply be an issue of the stereotypical idea that females are more sensitive than males, or are males being taught differently in their college and university classrooms? Whatever the cause, the fact remains that there is a shortage of male teachers, especially at the elementary level, and all teacher education programs need to key into the idea of supporting and encouraging male candidates. A recommendation for further study could include a focus on the dispositions of male teachers and their experiences in college classrooms.

Comparison by age of respondents.

Overall there was no real difference between respondents identified as 25 and younger (traditional age college students) and those identified as 26 and older (non-traditional age college students). Just as with the other comparison groups, aggregate reviews of all 45 dispositions and the two subsets identified no significant differences in exhibited or perceived instruction of dispositions. In fact, there were only four significant differences at the individual disposition level. Three dispositions with significant difference are exhibited dispositions. They are *I demonstrate qualities of humor, empathy, and warmth with others* ($p = .023$), *I am willing to receive feedback and assessment of my teaching* ($p = .027$), and *I cooperate with colleagues in planning instruction* ($p = .007$). In all three cases the younger teachers (25 years-old or younger) indicate they exhibit the disposition at a significantly higher rate than the teachers 26 years-old or older. The only other significant difference is on the perceived taught disposition *I uphold the laws and ethical codes governing the teaching profession* ($p = 0.032$). In this case the group 26 years-old or older indicated they perceived to be taught the disposition at a higher rate than the younger teachers. Due to the very limited number of significant differences, it is challenging to

draw any conclusions other than age does not seem to be a factor in exhibited or perception of taught dispositions of first-year teachers.

Recommendations

Of the triad knowledge, skills, and dispositions, dispositions have been claimed to be the most critical in order to be an effective teacher (Thornton, 2006; Wilkerson & Lang, 2007). The findings from this study indicate that new teachers exhibit positive dispositions at a very high rate. They also perceive that they were taught the dispositions at a high rate. Overall, these results show a very positive picture of teacher disposition education in this state. The curricular and instructional activities of dispositions currently being implemented seem to be working.

These generally positive results are tempered by two factors. First, the respondents in this study were first year teachers. Novice teachers tend to be in a euphoric stage where they feel they can conquer the world (Wong & Wong, 2009) or at least have not become jaded to the difficulties of the profession. Therefore, the highly positive responses given to this study may actually be a reflection of this novice mentality. An interesting follow up study would be to give the same survey to the same sample population after five or ten years of teaching experience to compare the responses. There would likely be greater variance in the responses to individual dispositions.

A second factor is a general lack of statistical differences between comparable groups. As reported above, very few statistically significant differences were found between comparable groups. The question can be raised if these statistically significant differences are meaningful in light of the overall positive response rate. What seems to be meaningful is that despite significant differences or not, novice teachers prepared by teacher education programs in this state report that they indeed exhibit dispositions and they perceive they were well prepared by the IHEs from

which they graduated. Despite this good news, there is always room for improvement. Therefore, the following recommendations are provided.

Recommendations for practice.

As mentioned above, the frequency distribution of exhibited dispositions identified few clusters of similar distributions. However, one such cluster that appeared lowest on the frequency distribution is that of communication skills; specifically communicating with parents and colleagues and reading non-verbal cues from students. This does not seem to be an issue of public speaking. Therefore, it is recommended that teacher education programs focus on or possibly require a course on interpersonal communications as part of the required curriculum.

Recommendations for small colleges and universities.

Anecdotally, there is a perception that small colleges and universities do a better job of instilling dispositions in candidates than large universities. The narrative built around these stories follows two themes. First, the small size provides an intimate atmosphere where deeper, personal relationships are built. Through these relationships professors and candidates take on mentor/mentee roles where dispositions (or lack thereof) can be openly discussed. The narrative further suggests that at the large university candidates are more likely to fall between the cracks. The second theme is that many smaller institutions are religiously affiliated or founded by a church. The narrative chain is created that the moral values (usually Christian in this region) of the founding religion permeate the culture of the institution and are often overtly taught. These moral values, in turn, are often closely related, if not the same as, positive teacher dispositions. Therefore, the assumption is made that candidates attending a small, private, religiously affiliated institution will be exposed to and attain, almost as if by osmosis, the moral values/dispositions.

This anecdotal evidence is somewhat supported by Baldwin (2007). Baldwin (2007) identified that small colleges and universities do not teach dispositions as overtly as large institutions. Instead smaller IHEs rely on service learning opportunities and similar non-curricular experiences to supplement a weaker dispositions curriculum.

This study, however, found no significant difference between graduates of large and small institutions on either exhibited dispositions or perception that they were taught the dispositions. Consequently, it appears that the anecdotes claiming that small colleges and universities do a better job at instilling dispositions is not correct. It is therefore recommended that small colleges and universities continue using service learning opportunities but also implement more overt instruction of dispositions within the teacher education curriculum to ensure the desired dispositions are attained.

Recommendation for large universities.

Although not statistically significant, graduates from the larger universities indicated they were taught the dispositions at a higher rate than those from the smaller institutions. This research supports Baldwin's work (2007) that identified more overt instruction of dispositions in course curriculum at large universities. In light of assumptions made in the previous section, it is conjectured that large universities may do a better job of overt instruction of dispositions due to accreditation requirements. Large universities, in an effort to keep candidates from falling through the cracks, place specific disposition assessments in courses to ensure all candidates will be assessed. It is recommended that large universities continue with their disposition systems embedded in courses as they currently do.

Additional recommendations.

Based on the findings of this study, it is recommended to focus on the development of dispositions of male teachers and continue to support and encourage them as they enter the profession. Although the reliability study of the TDI suggested no differences in the responses of males and females (Schulte, et al., 2002), this study identified more statistical differences in this comparison group than in any other group. In general the males indicated that they exhibited the dispositions at a lower rate than the females, yet they reported that they perceive they were taught at a higher rate. Whatever the reasons for this disconnect, teacher educators need to monitor the displayed dispositions of the male candidates and encourage their development.

Teacher education programs are encouraged to develop the informal assessment skills and encourage flexibility of their candidates. The responses from the study suggest that *reading the non-verbal communication of their students* is a disposition not taught. Through more focus on informal assessment skills, this disposition may be improved. It may also be that novice teachers truly are able to read their class, but may lack the wherewithal to deviate from a prepared lesson plan to make the necessary changes.

In summary, the following six observations and recommendations are made:

- Overall, candidates perceive they exhibit and were taught dispositions at a very high rate. The new teachers in this state seem well prepared and the colleges and universities are doing a good job.
- Increase instruction, possibly including a course, in interpersonal communications is recommended. Respondents indicated they were not comfortable communicating with parents and colleagues and had trouble reading the non-verbal cues of students.

- Small colleges and universities need to be more overt in the instruction of dispositions. Currently they rely on non-curricular activities such as service-learning opportunities and assume the dispositions are learned through these activities.
- Large universities need to maintain their efforts in incorporating dispositions into course work in order to not let students “fall through the cracks.”
- Additional effort needs to be placed on the development of dispositions in males. They indicate they are taught the dispositions, yet they do not report they exhibit them at as high a rate as the females.
- Increased instruction is needed in informal assessment techniques and flexibility of candidates. Through additional training novice teachers will be able to better read their students and, with flexibility, modify lessons on the spot as needed. These are skills more commonly seen in more experienced teachers.

Recommendation for further study

First-year teachers participating in this study believe they are taught the dispositions addressed by the TDI, they have learned them, and they are implementing them in their classrooms. While these findings are hopeful, there is still much work to be done. Five potential, future studies are discussed below.

For more than ten years, teacher education programs have been required by NCATE to assess dispositions. However, due to the nebulous nature of the definition, there is still much confusion as to how to go about this assessment. One goal of this study was to determine the common threads of dispositions in this state and thereby help refine the definition. The findings, however, were not as definitive as hoped. Therefore, one recommendation for further study is a broader study of exhibited dispositions in order to help define the construct.

A second possibility for future research involves further exploration of how dispositions are taught. Baldwin's (2007) comparative analysis of instruction of dispositions could be used as a starting point for researchers seeking to better understand current practices. Replicating Baldwin's study on a larger scale would help researchers define effective methodology, thereby providing more generalizable data.

Another area of needed additional study is that of dispositions and age. The assumption is made that with age comes maturity and added life experiences. Maturity and life experiences in turn are the tools for development of dispositions (Diez, 2007; Young, Barab, & Garrett, 2000). However, anecdotal evidence suggests this is a double-edged sword. Non-traditional students have been known to be outstanding candidates and others have proved to be nuisances. Those who are nuisances often display an attitude of superiority and do not take instruction well. In short, they lack the appropriate dispositions. Therefore, a more detailed study of dispositions and age may shed light on this topic. It seems particularly critical in a time when traditional teacher education programs are finding more competition to produce teachers from non-traditional, for profit programs.

A number of existing studies on teacher dispositions rely on self-reported data. A couple of studies (Keiser, 2005; Pottinger, 2009) have emerged that raise concern regarding self-reported data and the tendency of respondents to overestimate the quality of their work. Taking this into account, studies that triangulate self-reported data would be most welcome. These studies could ask supervising teacher, colleagues, or administrators to provide a counterpoint to the self-reported data. Consequently a more realistic view of teacher dispositions will be created.

Another method to create a more realistic view of teacher dispositions is to replicate this study with the same sample population in three, five, and ten years. The common theme of the

findings of this study is that novice teachers feel very well prepared in terms of dispositions. However, these responses may be inflated due to the natural euphoria and “change the world” mentality of novice teachers. Replication with the same population will give insight into the values of the teachers over time. Additional follow up could also include speculation as to why the respondents believe the changes (if any) occurred. Teacher education programs could use these data to help focus disposition education and these data could be used by inservice teachers and/or administrators to identify dispositions that are lost over time.

Over the last decade, much effort has been exerted to develop disposition assessment programs. However, the result of this work is a hodgepodge of disposition assessment systems and a still-as-yet clearly defined construct. The results of this study suggest that novice teachers indeed exhibit and perceive they were taught dispositions at a high rate. Despite these positive results, there is still much work to be done on this critical component of the teacher triad of knowledge, skills, and dispositions.

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Appendix A - TDI Alignment with INTASC Principles

Teacher Dispositions Index Items	INTASC Principle
1. I stimulate students' interests.	1
2. I select material that is relevant for students.	1
3. I select material that is interesting for students.	1
4. I create connections to subject matter that are meaningful to students.	1
21. I believe a teacher must use a variety of instructional strategies to optimize student learning.	2
22. I believe that all students can learn.	2
23. I believe the classroom environment a teacher creates greatly affects students' learning and development.	2
24. I understand students have certain needs that must be met before learning can take place.	2
25. I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	2
10. I provide appropriate feedback to encourage students in their development.	2
26. I understand that students learn in many different ways.	3
27. I believe it is important to involve all students in learning.	3
28. I understand that teachers' expectations impact student learning.	3
29. I am sensitive to student differences.	3
30. I respect the cultures of all students.	3
16. I am successful in facilitating learning for all students.	3
31. I demonstrate qualities of humor, empathy, and warmth with others.	5
32. I treat students with dignity and respect at all times.	5
33. I am patient when working with students.	5
19. I demonstrate and encourage democratic interaction in the classroom and school.	5
34. I am a thoughtful and responsive listener.	6

35. I communicate caring, concern, and a willingness to become involved with others.	6
20. I accurately read the non-verbal communication of students.	6
36. I assume responsibility when working with others.	7
37. I view teaching as a collaborative effort among educators.	7
38. I am open to adjusting and revising my plans to meet student needs.	7
39. I believe it is important to learn about students and their community.	7
5. I cooperate with colleagues in planning instruction.	7
6. I value both long term and short term planning.	7
7. I listen to colleagues' ideas and suggestions to improve instruction.	7
8. I work well with others in implementing a common curriculum.	7
40. I view teaching as an important profession.	9
41. I am punctual and reliable in my attendance.	9
42. I maintain a professional appearance.	9
43. I honor my commitments.	9
44. I am willing to receive feedback and assessment of my teaching.	9
45. I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	9
9. I am committed to critical reflection for my professional growth.	9
11. I actively seek out professional growth opportunities.	9
12. I uphold the laws and ethical codes governing the teaching profession.	9
13. I stay current with the evolving nature of the teaching profession.	9
14. I engage in discussions about new ideas in the teaching profession.	9
15. I engage in research-based teaching practices.	9
17. I take initiative to promote ethical and responsible professional practice.	9
18. I communicate effectively with students, parents, and colleagues.	9

Appendix B - Permission to use Teacher Disposition Index

Shane Kirchner

From: Nancy Edick <nedick@mail.unomaha.edu>
Sent: Thursday, April 08, 2010 10:56 AM
To: Shane Kirchner
Cc: kkeiser@unomaha.edu; nedick@unomaha.edu; skedwards@unomaha.edu
Subject: Re: Teacher Disposition Index

Shane,

You may certainly use the instrument we simply ask that you cite it in your work. Best of luck with your graduate work!

Nancy

Nancy Edick
University of Nebraska at Omaha
Dean, College of Education
6001 Dodge Street, KH 208
Omaha, NE 68182-0456
(402) 554-2719

From: "Shane Kirchner" <kirchnes@mcpherson.edu>
To: <kkeiser@unomaha.edu>, <nedick@unomaha.edu>, <skedwards@unomaha.edu>
Date: 04/05/2010 03:13 PM
Subject: Teacher Disposition Index

Dr. Edick, Dr. Edwards, and Dr. Keiser,
I am a doctoral candidate from Kansas State University. I am researching teacher dispositions and have found your names associated with the Teacher Disposition Index.
For my dissertation research I would like to survey first year teachers using the Teacher Disposition Index. My goal is to look at differences in the exhibited dispositions of novice teachers from various NCATE accredited teacher education programs.
I was able to find the instrument online, but I would also like to seek your permission to use it. Please let me know what I need to do to officially gather this permission, if anything.
Thank you for your help.

Shane Kirchner
Assistant Professor of Education
McPherson College
1600 E. Euclid
P.O. Box 1402
McPherson, KS 67460
kirchnes@mcpherson.edu
620-242-0544

Appendix C - Letter of Transmittal

Dear XXXX:

Will you do me a favor? As a fellow teacher I know this time year is very busy, but I hope you will give me 10 minutes of your time.

As part of my doctoral studies I am conducting a statewide survey among novice teachers. The purpose of this research is threefold: 1) to identify common dispositions of novice teachers, 2) to determine if you felt your college or university taught these dispositions, and 3) to compare dispositions of graduates from small colleges to those from large universities. Your answers will provide teacher education programs across the state with valuable information that can be used to improve other future teachers.

You have been selected as you are a new teacher in Kansas and graduated from an NCATE accredited teacher education program in the state. As a recent graduate, it is your responses that are needed for this research.

It will only take approximately 10 minutes to complete this survey. The survey can be accessed from this link <https://surveys.ksu.edu/TS?offeringId=XXXX> . (If the link does not automatically redirect you to the survey, please copy and paste into your browser.)

In order to ensure that your answers remain confidential please enter the following code where indicated on the survey:08UM450. (You may cut and paste the code if you like.) Your individual answers will be used only in combination with those from other novice teachers.

If you are interested in receiving a summary of the findings of this research, simply indicate so on the appropriate part of the survey. A brief summary will be sent electronically when the research is completed.

Please complete the survey at your earliest convenience. Just click [here](#)! Thank you very much for your help.

Sincerely,
Shane Kirchner
Doctoral Candidate
Kansas State University
College of Education

Appendix D - Modified Teacher Disposition Index

Teacher Disposition Index

Participant Code: _____

College or University from which you received
licensure: _____

Demographic Information

Gender (circle one)	Male	Female
Age (circle one)	24 or younger	25 or older

Student-Centered Subscale

Select the item that best represents how closely you agree or disagree with each statement.

Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), Strongly Agree (SA).

Then, for each statement, identify if you feel your teacher education program taught or prepared you for the statement. **Yes (Y), No (N).**

I stimulate students' interests.	SD	D	N	A	SA	Y	N
I select material that is relevant for students.	SD	D	N	A	SA	Y	N
I select material that is interesting for students.	SD	D	N	A	SA	Y	N
I create connections to subject matter that are meaningful to students.	SD	D	N	A	SA	Y	N
I provide appropriate feedback to encourage students in their development.	SD	D	N	A	SA	Y	N
I am successful in facilitating learning for all students.	SD	D	N	A	SA	Y	N
I demonstrate and encourage democratic interaction in the classroom and school.	SD	D	N	A	SA	Y	N
I accurately read the non-verbal communication of students.	SD	D	N	A	SA	Y	N
I cooperate with colleagues in planning instruction.	SD	D	N	A	SA	Y	N
I value both long term and short term planning.	SD	D	N	A	SA	Y	N
I listen to colleagues' ideas and suggestions to improve instruction.	SD	D	N	A	SA	Y	N
I work well with others in implementing a common curriculum.	SD	D	N	A	SA	Y	N
I am committed to critical reflection for my professional growth.	SD	D	N	A	SA	Y	N
I actively seek out professional growth opportunities.	SD	D	N	A	SA	Y	N

I uphold the laws and ethical codes governing the teaching profession.	SD	D	N	A	SA	Y	N
I stay current with the evolving nature of the teaching profession.	SD	D	N	A	SA	Y	N
I engage in discussions about new ideas in the teaching profession.	SD	D	N	A	SA	Y	N
I engage in research-based teaching practices.	SD	D	N	A	SA	Y	N
I take initiative to promote ethical and responsible professional practice.	SD	D	N	A	SA	Y	N
I communicate effectively with students, parents, and colleagues.	SD	D	N	A	SA	Y	N

Professionalism, Curriculum-Centered Subscale

Select the item that best represents how closely you agree or disagree with each statement.

Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), Strongly Agree (SA).

Then, for each statement, identify if you feel your teacher education program taught or prepared you for the statement. **Yes (Y), No (N).**

I believe a teacher must use a variety of instructional strategies to optimize student learning.	SD	D	N	A	SA	Y	N
I believe that all students can learn.	SD	D	N	A	SA	Y	N
I believe the classroom environment a teacher creates greatly affects students' learning and development.	SD	D	N	A	SA	Y	N
I understand students have certain needs that must be met before learning can take place.	SD	D	N	A	SA	Y	N
I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	SD	D	N	A	SA	Y	N
I understand that students learn in many different ways.	SD	D	N	A	SA	Y	N
I believe it is important to involve all students in learning.	SD	D	N	A	SA	Y	N
I understand that teachers' expectations impact student learning.	SD	D	N	A	SA	Y	N
I am sensitive to student differences.	SD	D	N	A	SA	Y	N
I respect the cultures of all students.	SD	D	N	A	SA	Y	N
I demonstrate qualities of humor, empathy, and warmth with others.	SD	D	N	A	SA	Y	N
I treat students with dignity and respect at all times.	SD	D	N	A	SA	Y	N
I am patient when working with students.	SD	D	N	A	SA	Y	N
I am a thoughtful and responsive listener.	SD	D	N	A	SA	Y	N

I communicate caring, concern, and a willingness to become involved with others.	SD	D	N	A	SA	Y	N
I assume responsibility when working with others.	SD	D	N	A	SA	Y	N
I view teaching as a collaborative effort among educators.	SD	D	N	A	SA	Y	N
I am open to adjusting and revising my plans to meet student needs.	SD	D	N	A	SA	Y	N
I believe it is important to learn about students and their community.	SD	D	N	A	SA	Y	N
I view teaching as an important profession.	SD	D	N	A	SA	Y	N
I am punctual and reliable in my attendance.	SD	D	N	A	SA	Y	N
I maintain a professional appearance.	SD	D	N	A	SA	Y	N
I honor my commitments.	SD	D	N	A	SA	Y	N
I am willing to receive feedback and assessment of my teaching.	SD	D	N	A	SA	Y	N
I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	SD	D	N	A	SA	Y	N