

AN INVESTIGATION ON THE IMPACT OF THE SOCIO-PSYCHOLOGICAL EFFECTS OF TEACHER DISPOSITION ON THE ACADEMIC PERFORMANCE OF STUDENTS IN A DIVERSELY POPULATED ELEMENTARY SCHOOL

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ABSTRACT

The purpose of this research was to examine how teacher disposition affects student academic performance through the validity and reliability of a quantitative inventory instrument: The Teacher Dispositions Index [TDI] measures the dispositions of effective teachers specified by the Interstate New Teacher Assessment and Support Consortium.

Keywords: Achievement, Disposition, Education Science, Eduscience, Impact, Investigation, Socio-Psychological, Teacher Dispositions Index, Qualitative Inquiry, Teacher, Trichotomy, and Tri-Squared.

INTRODUCTION

The focus of this study was to determine the relationship between student achievement and teacher attitude. For many public school stakeholders, student achievement is valuable. Teachers, students, and families of students want success in school. School districts and communities in North Carolina are impacted by achievement statistics as they are rated according to student achievement results. Defining the characteristics of successful teachers is focused historically on measurable standardized test, checklists, and rubrics. Most recent research identifies attributes and characteristics as demonstrated by successful teachers that are not easily measured or taught. Professors in teacher education programs are interested in defining the qualities of teachers who successfully connect with all students. Attaching student achievement and teacher attitudes will help policy makers develop a more global definition of teacher quality. Berliner (2005) explained: "States are permitted to use teacher licensure tests to demonstrate to the federal government that their teachers are highly qualified, that is, capable, competent, skilled, trained, practiced, and so forth. The theory of action behind the policy is that if America's teachers were of sufficiently high quality, then education would improve." (p. 205)

Researchers such as Berliner (2005) along with educators have argued that some teachers simply just have the gift to teach and those gifts allow success in the classroom over another when handling classroom management, instruction delivery, or parent and student rapport. Others would argue that much of these characteristics which separate the more pronounced teachers from the rest cannot be taught, identified, or measured. Nevertheless, if most of these characteristics could be identified as attributing to student achievement, even culminating attempt would be beneficial. Teacher quality incorporates both good and effective teaching. Good teachers adhere to defined teaching standards and effective teachers improve student achievement. Additional to practical application of identifying attributes, the National Council for Accreditation of Teacher Education (NCATE, 2008) requires that they are addressed because personal attributes are not easily assessed.

Attending to this issue in response to NCATE's requirement, COEs have analyzed processes to identify characteristics. As a result, colleges of education have chosen to identify these attributes or characteristics as dispositions. Evidence to demonstrate that teacher candidates are acquiring the knowledge, skills, and dispositions

necessary to have positive impact on P-12 learning is required by NCATE (NCATE, 2008). Although, NCATE does not specifically define what elements constitute target dispositions. In its explanation of "dispositional targets," NCATE uses the following statement: Candidates (are able to) work with students, families, and communities in ways that reflect the dispositions expected of professional educators as delineated in professional, state, and institutional standards (NCATE, 2008). Teacher education programs are implementing interviews and assessments of teacher dispositions for admissions.

Rationale for the Research Study

The Tri-Squared statistical test and research methodology was used in this study to determine the efficacy of the Teacher Disposition Index [TDI] in determining the relationship between student achievement and teacher attitude. Tri-Squared allowed the investigators to qualitatively determine the overall effectiveness of the research as it related to teacher disposition (effect) and student academic performance (outcome). The transformation from qualitative input into quantitative output as a result of the Tri-Squared analysis yielded a precise and specific result that validated the initial research hypothesis.

Teacher Disposition

Many pre-service and new teachers have an overwhelming frustration when they enter a diverse classroom in today's elementary school. An exploration into the connection between teacher education programs and the first years of teaching must be conducted to determine the level of preparation new teachers felt as a result of their university studies. As researchers discover the factors that contribute to the difficulties that many new teachers face in a diverse classroom population, resolutions and success will proceed. Teacher attitudes, practices, and beliefs have a significant impact on student achievement (Palardy & Rumberger, 2008). Past and current research attest that the teacher is the most important aspect in growth and student achievement (Marzano, 2003; Marzano, 2007). Several studies examine teacher knowledge and quality

without acknowledging the importance of teacher attitude. Pryor and Pryor (2005) added to the research of Oskamp and Schultz (2005) and defined attitudes as beliefs that can be favorable, unfavorable, or neutral. Teacher behaviors are influenced by teacher attitudes.

The intent of the study was to add to the current research related to new teacher quality and student achievement by describing effects of distinguishing teacher attitudes in connection to student achievement, essential elements of which could be identified and added to the concept of teacher quality and retention. Therefore, the researcher recognizes that several stakeholders and constituents will benefit from this study's findings: school administrators, teachers, local district leaders in charge of new teacher orientation and college and university leader heads of teacher education programs such as; School of Education Deans and professors. School administrators and teachers can collaborate on the current processes implemented at their schools, Central local district leaders in charge of new teacher orientation and mentor programs may be able to use this study to address the needs of new teachers and teachers new to the school system.

Finally, the researcher understands the use of a mixed method approach will seize the many realities of pre-service teacher training programs and develop meaningful data for teachers enrolled in these programs and the principals hiring new teachers. The researcher pursued discussing information about pre-service and new teacher training programs through a layman's format so all readers would understand the purpose, findings, and outcome of the study. Stake (1995) provided clarity regarding the researcher's responsibility to their readers. He stated, "Contemporary views of research establish the responsibility of researchers to assist readers in arriving at high-quality understandings. The analyses and interpretations of researchers need to be paralleled by those of readers. For this, the researcher has an obligation to provide high-quality input for the reader's study" (p. 88).

Socio-Psychological Impact of Teacher Disposition on Learning

The researcher affirms that once pre-service and new teachers are trained to work with diverse student populations, many of the new teachers will remain in the classroom longer than one to three years and make teaching a profession instead of a job. Policymakers, researchers, and educators have an immeasurable interest in which teacher beliefs, attitudes, and behaviors maximize student achievement. Wayne, Youngs, and Fleischman (2005) wrote: "For policymakers and researchers looking for ways to improve K-12 education, one enduring approach has been to focus on teachers. Teachers are the system's principal resource. Their salaries occupy the largest share of K-12 education budgets. And both intuition and empirical research tell us that the achievement of schoolchildren depends substantially on the teachers they are assigned" (p 89).

Interpretations concerning the relationship between teacher attitudes and student achievement are relevant for many school districts in hiring new teachers, designing professional development implementation, and evaluation of methods to enhance student achievement. Currently, North Carolina state policymakers are involved with developing inclusive definitions for teaching standards including dispositions that influence student achievement (National Council for Accreditation of Teacher Education [NCATE], 2008; North Carolina Department of Public Instruction [NCDPI], 2004 & 2007). Wasicko (2002) wrote, "To accurately screen teachers and select those who will be most effective in the classroom procedures must exist measure attitudes, values, and other perceptual factors that underlie and therefore predict external behavioral similarities" (p. 8). Connecting teacher attitudes to student achievement is an important component for school districts, university education programs, and state policy makers. Lastly, the significance of this study was to examine the effectiveness of teacher education preparation programs and examine the validity and reliability of a quantitative inventory instrument: The Teacher Dispositions Index (or TDI) which measures the dispositions of effective teachers specified by the Interstate New Teacher Assessment and Support Consortium.

Evidence from the TDI's validity and reliability will assess new teacher dispositions over the course of their one to three years of teaching. The TDI could be used to assess dispositions of new teachers' who participated in a college or university education preparation program and employ useful supports to improve the quality of induction programs and/or help new teachers determine if teaching is an appropriate professional fit.

Research Design

This research investigation used a combination of qualitative and quantitative methods in a mixed methods approach. Both historical and current relevant research was included to determine trends in teacher attitudes related and relative to student achievement. The participants included (25) teachers involved in the TDI survey, (11) involved in the focus group discussion and interviews. The dependent variable in this study was the (TDI) to determine the relationship between teacher dispositions and student achievement. The independent variable in this study was the teacher focus groups, which were also used to determine attitudes toward teacher preparedness and professional development support. The dependent variable in this study was student achievement analysis of the End-of-Grade (EOG) reading and math achievement scores that were taken in spring of 2009 and 2010 for 3rd through 5th grade students. The control variable in this study was the effect of teacher dispositions on student achievement determined by Adequate Yearly Progress (AYP) school report card. A few of the extraneous variables would include parents, mental health concerns, death of parent, and/or the student's gender and race. The data analysis method for the study was the novel Total Transitive Trichotomy Squared or Tri-Squared Test (Appendices Table 1).

Origins of Trichotomy and Trichotomy-Squared

The term is pronounced ['trahy-kot-uh-mee'], spelled "trichotomy", and is a noun with the plural written form "trichotomies". A "Trichotomy" in terms of philosophy can be referred to as a threefold method of classification. Philosopher Immanuel Kant adapted the Thomistic acts of intellect in his trichotomy of higher cognition-(i)

understanding, (ii) judgment, (iii) reason-which he correlated with his adaptation in the soul's capacities- (iv) cognitive faculties, (v) feeling of pleasure or displeasure, and (vi) faculty of desire-of Tetens's trichotomy of feeling, understanding, will. (Teo, 2005). In terms of mathematics, Apostol in his book on calculus defined "The Law of Trichotomy" as: Every real number is negative, 0, or positive. The law is sometimes stated as "For arbitrary real numbers a and b , exactly one of the relations $a < b$, $a = b$, and $a > b$ holds" (Apostol, 1967).

It is important to note that in mathematics, the law (or axiom) of trichotomy is most commonly the statement that for any (real) numbers x and y , exactly one of the following relations holds. Until the end of the 19th century the law of trichotomy was tacitly assumed true without having been thoroughly examined (Singh, 2002). A proof was sought by Logicians and the law was indeed proved to be true. If applied to cardinal numbers, the law of trichotomy is equivalent to the axiom of choice. More generally, a binary relation R on X is trichotomous if for all x and y in X exactly one of xRy , yRx or $x = y$ holds. If such a relation is also transitive it is a strict total order; this is a special case of a strict weak order. For example, in the case of three elements the relation R given by aRb , aRc , bRc is a strict total order, while the relation R given by the cyclic aRb , bRc , cRa is a non-transitive trichotomous relation. In the definition of an ordered integral domain or ordered field, the law of trichotomy is usually taken as more foundational than the law of total order, with $y = 0$, where 0 is the zero of the integral domain or field. In set theory, trichotomy is most commonly defined as a property that a binary relation $<$ has when all its members $\langle x, y \rangle$ satisfy exactly one of the relations listed above. Strict inequality is an example of a trichotomous relation in this sense. Trichotomous relations in this sense are irreflexive and antisymmetric (Sensagent, 2012). It is from these logical and mathematical definitions that the author derives the definition of "Research Trichotomy" and applies it to the qualitative and quantitative analysis of the affective domain of learning (Osler, 2012).

The term "Trichotomy" is defined in Trichotomy-Squared in the following manner: "Trichotomy": is pronounced [trahy-

kot-uhmee], spelled "trichotomy", and is a noun with the plural written form "trichotomies". "Trichotomy" has the following threefold definition: (i) Separation or division into three distinct parts, kinds, groups, units, etc.; (ii) Subdivision or classification of some whole into equal sections of three or "trifold segmentation"; and (iii) Categorization or division into three mutually exclusive, opposed, or contradictory groups, for example-"A trichotomy between thought, emotions, and action" (Osler, 2012). Trichotomous relations in this sense are irreflexive and antisymmetric (Sensagent, 2012). In this study a trichotomy (specifically the mathematical "Law of Trichotomy") was used to develop the investigative instrument that determined the efficacy of the research hypotheses. The process of designing instruments for the purposes of assessment and evaluation is called "Psychometrics". Psychometrics is broadly defined as the science of psychological assessment (Rust & Golombok, 1989). It is from these logical and mathematical definitions that the author applies a definitive "Research Trichotomy" to the qualitative and quantitative analysis of the socio-psychological effects of teacher disposition on the academic performance of students in a diversely populated elementary schoolTe.

Tri-Squared Research Methodology

The Tri-Squared research procedure consists of a four step approach designed to provide the researcher with a clear and precise set of data to conduct research, analyze data, and determine the level of significance required to either validate or reject the initial research null hypothesis. The four steps are as follows:

- Design of an Inventive Investigative Instrument that has Trichotomous Categorical Variables and Trichotomous Outcome Variables;
- Establish the Research Effect Size, Sample Size with associated Alpha Level;
- Establish Mathematical Hypotheses; and
- Use the Tri-Squared Test as the Data Analysis Procedure.

Trichotomous Categorical Variables

- Given the opportunity, educators actively participate

in professional development opportunities that are meaningful to student achievement.

- Effective professional learning including coursework, implementation, and follow-up support, improve instruction and therefore improve student achievement.
- Teachers with positive attitudes related to student, curriculum issues, and matters of professionalism have a greater impact on student achievement and growth than do those with less positive attitudes.

Trichotomous Outcome Variables

- Yes
- No
- Missing

Research Hypotheses

The following were the research hypotheses for the example study

H_0 : There are significant differences in the overall academic performance of students at a diversely populated elementary school based upon teacher disposition.

H_1 : There are no significant differences in the overall academic performance of students at a diversely populated elementary school based upon teacher disposition.

Mathematical Hypotheses

$H_0: Tri^2 = 0$

$H_1: Tri^2 \neq 0$

Results of the Tri-Squared Test

The Tri-Squared Test statistical analysis procedure was used to analyze data in the study. An alpha-level of 0.20 was calculated using Tri-Squared and also considered in light of the research context that was evidence-based in the prescribed schools that had restricted and controlled learning environments that allowed for very few chance factors to affect the outcomes of the research investigation. The study yielded the following final results using the Tri-Squared analysis procedure provided in tabular format presented in Table 1 of the Appendices.

Table One Summary: Table 1 in the Appendices illustrates

the qualitative mathematical application of the Trichotomous-Squared (“Trichotomy-Squared”, “Tri-Squared” or “Tri-Square”) statistical analysis procedure. “Tri-Squared” is the mathematical transformation of qualitative data into quantitative data for the purpose of validating a research hypothesis. The Table One 3 × 3 Table reports the qualitative outcomes based on the Inventive Investigative Instrument Trichotomous Categorical Variables according to participant responses as the Trichotomous Outcome Variables. Table One shows that participants primarily and overwhelmingly selected the “Yes” Categorical Variable ($a_1b_1 = 24$, $a_2b_1 = 25$, and $a_3b_1 = 25$) rather than the alternative Categorical Variables of either “No” or “Missing” (the “Missing” C. V. indicated unselected or inapplicable responses to an item). The mathematical formula for the Tri-Squared is reported illustrating the final outcome of the research hypothesis test (Table 1); the null hypothesis (H_0) was rejected at $p > 0.20$ is 5.989.

Teacher Disposition Socio-Psychological Qualitative Outcomes of the Tri-Squared Test

Data Analyzed Using the Trichotomous-Squared Three by Three Table designed to analyze the research questions from an Inventive Investigative Instrument with the following Trichotomous Categorical Variables: a_1 = Does the disposition of an elementary school teacher affect their professional development]; a_2 = What is the relationship between a teacher's disposition toward students and student achievement]; and a_3 = What predictions related to student achievement may be

Trichotomous Categorical Variables	Inventive Investigative Instrument Item
a_1	Does the disposition of an elementary school teacher affect their professional development?
a_2	What is the relationship between a teacher's disposition toward students and student achievement?
a_3	What predictions related to student achievement may be made based on teacher dispositions as measured by the Teacher Disposition Index (TDI)?
Trichotomous Outcome Variables	Inventive Investigative Instrument Response
b_2	Yes
b_3	No
b_4	Missing

Table 1. Describes in detail the results of the Tri-Squared Analysis

made based on teacher dispositions as measured by the Teacher Disposition Index (TDI)]. The 3×3 Table has the following Trichotomous Outcome Variables: $b_1 = \text{Yes}$; $b_2 = \text{No}$; and $b_3 = \text{Missing}$. The Inputted Qualitative Outcomes are reported as follows:

$n_{Tri} = 36$ $\alpha = 0.20$		TRICHOTOMOUS CATEGORICAL VARIABLES		
		a_1	a_2	a_3
TRICHOTOMOUS OUTCOME VARIABLES	b_1	24	25	25
	b_2	1	6	5
	b_3	11	5	6

$Tri^2_{d.f.} = [C - 1][R - 1] = [3 - 1][3 - 1] = 4 = Tri^2_{[3,1]}$

The Tri-Square Test Formula for the Transformation of Trichotomous Qualitative Outcomes into Trichotomous Quantitative Outcomes to Determine the Validity of the Research Hypothesis:

$$Tri^2 = T_{Sum} \left[\left(Tri_x - Tri_y \right)^2 : Tri_y \right]$$

Tri² Critical Value Table = 8.131 (with d.f. = 4 at $\alpha = 0.20$). For d.f. = 4, the Critical Value for $p > 0.20$ is 5.989. The calculated Tri-Square value is 6.345, thus, the null hypothesis (H_0) is rejected by virtue of the hypothesis test which yields the following: Tri-Squared Critical Value of 5.989 < 6.345 the Calculated Tri-Squared Value.

Implications

The implications of the study are evident. Students will perform positively or negatively dependent upon their teachers' disposition. The study displayed all of the new teachers in one local school. New teachers will gain highly qualified career teacher status with effective, comprehensive, ongoing, and sustained professional development. Disposition of new teachers associated with what and how they teach, along with their perception of students and student learning impact their teaching behaviors. Munck (2007) wrote, "The outcome of attitudes is the tendency to react favorably or unfavorably to situations, person, or events. Accordingly, teacher actions are shaped by their attitudes" (p. 15).

Summary

The intent of this study was to add to the current research related to teacher quality and student achievement. The investigators believed that by identifying specific teacher attitudes that positively impact student achievement, defining elements could be added to the concept of teacher's disposition toward curriculum and staff development and reading achievement. Ultimately, the study determined that teacher disposition is a critical component vital to the academic achievement of young children. This outcome is supported by the final results of the Tri-Square analysis which yielded the following: A Critical Tri² value of 5.989 < 6.345 the Calculated Tri² value. Thus, the research null hypothesis was rejected and it can therefore be stated that teacher disposition does have an effect on student achievement especially in a diversely populated elementary school.

In addition, the research investigation further supported the implementation of trichotomous psychometrics as Tri-Squared Inventive Investigative Instruments empowers 21st Century educational researchers as "Educational Scientists" who are embarking on novel approaches to answer age old questions about education, pedagogy, and the process of learning (Osler, 2012). These "Eduscientists" are seeking instruments that satisfy specific investigative needs, address specific research questions, and validate unique research situations. This type of psychometrics also enables instruments to be especially designed to address the specific needs of educational institutions, specialized learning environments, and distinctive pedagogical situations. It illustrates the value of analyzing small groups, sample sizes, and individuals without sacrificing statistical power or the value of research due to the uniqueness of the environment under examination. In this manner psychometrics expands, new and novel research instruments are developed, and the field of Educational Science is validated.

Redefining the Socio-Psychological Role of the Teacher through Educational Science

The field of "Education Science" is also represented by the term "Eduscience" which is a portmanteau of the two

terms "Education" and "Science" (Osler & Waden, 2012). Similar to the field of "Bioscience", Eduscience is the study of education wherein applicable sciences (such as ergonomics, statistics, technology, etc.) are applied to enhance and improve learning. The primary purpose of the field of Eduscience is the study and application of solutions to improve and enhance the learning environment and learning in general. Eduscience is solution-driven and is actively concerned with the transfer and dissemination of knowledge. Education Science is a broad field and its professionals are directly involved in the field. Those who are actively involved in Eduscience can be referred to as "Education or Educational Scientists". Educational Scientists or "Eduscientists" are multifaceted professionals who have a variety of areas of expertise. They can assume multiple roles in the educational environment and can serve in a variety of offices and in a multitude of capacities. The primary positions that Eduscientists assume are in the following areas: Administration (as Leaders, Organizational Heads, and Organizational Management Professionals), Instruction (as Teachers, Professors, and Facilitators), Practice (as Practitioners in a variety Specified Areas and Arenas), and Technology (as Educational Technologists, Instructional Technologists, and Information Technologists). In these positions Eduscientists effectively use, analyze, study, and deploy novel instructional learning theories, methodologies, strategies, solutions, tools, and techniques in both traditional or virtual (pedagogical and andragogical) settings to bring about learning (Osler, 2012). This positive take on teaching has the ability to reaffirm teacher's professionalism and strengthen their outlook which can attribute to a positive outlook in the learning environment that is beneficial to both them and their students.

Transforming Teachers into Positive Conduits of Knowledge Transfer: The Ultimate Goal of Education Science

Teachers as "Educational Scientists" strive to make the process of knowledge transfer both transitive and transformational. Student success at all levels is their goal. They seek to create a transitive and transformative knowledge transfer process that is as seamless and as

harmonious as possible in an effort to empower, enhance, and improve learning. Eduscientists are masters of teaching who also are also highly proficient practitioners who are able draw from personal and professional experiences to make the learning environment more viable (Accessible), usable (Ergonomic), teachable (Instructional), engaging (Relevant), approachable (Adaptive), exploration-based (Discovery), and inspirational (Transformative). The Total Transformative Trichotomy-Squared Test is a comprehensive multi-step research methodology that is employed by Eduscientists. It is especially designed to conduct qualitative and quantitative investigations in educational settings and the learning environment thus empowering the teacher/educator. The teacher can now be viewed in a new and positive light. They are positive change agents that create and channel a positive level of professionalism with respectful autonomy that is grounded in authentic learner-driven research that takes into account national and state standards. This research supports the aforementioned conclusion in that teacher disposition (whether positive or negative) has impact on how students perform especially at the elementary school level.

Research Limitations

The following limitations apply to this study: (i) The researchers were limited by the size of the study; (ii) The responsibility to develop professional learning opportunities for teachers were based on school and district availability; (iii) Due to the district's budget crisis (that took place during the time that the study was conducted), many services and employees suffered tremendous decrease in monetary allotments thereby affecting teacher satisfaction in their job setting and lowered participant morale; (iv) The negative morale was evident in participant responses in focus group responses; (v) Participants provided their perceptions based on their previous and current professional learning needs.

Implications Relevant to Teaching, Learning, and Development: Future Research

The intent of this research investigation was to explore the

impact and effect of teacher disposition on student achievement. Based upon the analysis of data, the researchers recommend that future investigations (involving teacher dispositions and student achievement) be conducted with much larger sample sizes for the purposes of determining teacher quality, instructional efficacy, best practice sustainability, educational validity, and the impact of learning for long-term student success. It may enhance future research to include or add other standardized measures of student achievement. In this investigation, student achievement was limited to scores on standardized state math and reading achievement tests. As researchers in others states conduct similar research, they may wish add other existing measures of student achievement that could shed light on areas not covered in this investigation.

It is recommended that further research studies conducted in this area include student perceptions of their own learning. This will add a subtle but in-depth level of information that directly addresses exactly what impacts student achievement (and aid in the process of determining why the identified variable is effective). Adding these parameters to future studies will greatly add accuracy to future research investigations. The findings that resulted from this study open the door to inquiry related to teacher preparedness, readiness, and outlook towards education as a profession. Dispositions, perceptions, and attitudes are not easily measured and therefore, not often selected as topics for research. The importance of this study is that it provides a model for conducting research in these arenas. It provides an in-depth insight as to what can improve teaching as a practice and as a profession.

References

- [1]. **Apostol, T. M. (1967).** *Calculus, second edition, Volume one: One-variable calculus, with an introduction to linear algebra.* Waltham, MA: Blaisdell.
- [2]. **Berliner, D. (2005).** The near impossibility of testing for teacher quality. *Journal of Teacher Education*, 56, 205-213. Retrieved March 3, 2012, from the ProQuest database.
- [3]. **Marzano, R. J. (2003).** *What works in schools: Translating research into action.* Alexandria, VA: Association for Supervision and Curriculum Development.
- [4]. **Marzano, R. J. (2007).** *The art and science of teaching.* Alexandria, VA: Association for Supervision and Curriculum Development.
- [5]. **Munck, M. (2007).** Science pedagogy, teacher attitudes, and student success. *Journal of Elementary Science Education*, 19(2), 13-14. Retrieved March 17, 2012, from ProQuest database.
- [6]. **National Council for Accreditation of Teacher Education (NCATE) (2008).** *Professional standards for the accreditation of teacher preparation institutions.* Retrieved March 8, 2012, from <http://www.ncate.org/documents/standards/NCATE%20Standards%202008.pdf>
- [7]. **North Carolina Department of Public Instruction (NCDPI) (2004).** *Teaching in North Carolina.* Retrieved March 8, 2012, from the North Carolina Department of Education Web site: <http://www.ncpublicschools.org/nclb/highly/>
- [8]. **North Carolina Department of Public Instruction (NCDPI) (2007).** *Teaching in North Carolina.* Retrieved April 5, 2012, from the North Carolina Department of Education Web site: <http://accrpt.ncpublicschools.org/app/2011/disag/>
- [9]. **Oskamp, S., & Schultz, P. W. (2005).** *Attitudes and opinions.* Mahwah, NJ: Laurence Erlbaum Associates.
- [10]. **Osler, J. E. (2012).** Trichotomy-Squared – A novel mixed methods test and research procedure designed to analyze, transform, and compare qualitative and quantitative data for education scientists who are administrators, practitioners, teachers, and technologists. July-September *i-manager's (International) Journal on Mathematics*. Vol. 1, No 3.
- [11]. **Osler, J. E. & Waden, C. (2012).** Using innovative technical solutions as an intervention for at risk students: a meta-cognitive statistical analysis to determine the impact of ninth grade freshman academies, centers, and center models upon minority student retention and achievement. September-November *i-manager's (International) Journal on School Educational Technology*. Vol. 7, No 3.

[12]. Parlardy, G. J., & Rumberger, R. W. (2008). Teacher effectiveness in first grade: The importance of background qualifications, attitudes, and instructional practices for student learning. *Educational Evaluation and Policy Analysis*, 30, 111-140. Retrieved March 4, 2012, from ProQuest database.

[13]. Pryor, B. W., & Pryor, C. R. (2005). *The school leader's guide to understanding attitude and influencing behavior: Working with teachers, parents, students, and the community*. Thousand Oaks, CA: Corwin Press.

[14]. Rust, J. & Golombok, S. (1989). *Modern psychometrics: The science of psychological assessment* (2nd ed.). Florence, KY, US: Taylor & Frances/Routledge.

[15]. Sensagent (2012). Retrieved, May 9, 2012: [http://dictionary.sensagent.com/trichotomy+\(mathematics\)/en-en/](http://dictionary.sensagent.com/trichotomy+(mathematics)/en-en/)

[16]. Singh, S. (2002). *Fermat's last theorem*. Hammersmith, London, UK: Harper Collins Paperback.

[17]. Stake, R. (1995). *The art of case study research*. Thousand Oaks, CA: SAGE Publications.

[18]. Teo, T. (2005). *The critique of psychology: from Kant to postcolonial theory*. New York, NY: Springer Science+Business Media, Inc.

[19]. Wasicsko, M., M. (2002). *Assessing educator dispositions: A perceptual psychological approach*. Richmond, Kentucky: Eastern Kentucky University. Retrieved March 7, 2012, from <http://www.education.eku.edu/Dean/DispositionsManual.pdf>

[20]. Wayne, A. J., Youngs, P., & Fleischman, S. (2005). Improving teacher induction. *Educational Leadership*, 62 (8): 76-78.

Appendices

Wayne State College
TEACHER DISPOSITION SURVEY

NAME: (please print) _____ DATE: _____
Student Number _____

Please mark your level of agreement with each statement listed below using the following response scale:

0 = Strongly Disagree	1 = Disagree	2 = Neutral	3 = Agree	4 = Strongly Agree
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1. I believe a teacher must use a variety of instructional strategies to optimize student learning. 0 1 2 3 4

2. I understand students need to be treated as individuals in the learning process. 0 1 2 3 4

3. I demonstrate qualities of humor, empathy, and warmth with others.	0	1	2	3	4
4. I am a thoughtful and responsive listener.	0	1	2	3	4
5. I assume responsibility when working with others.	0	1	2	3	4
6. I am committed to critical reflection for my professional growth.	0	1	2	3	4
7. I believe that what students are learning must be relevant to a student's life, past & present.	0	1	2	3	4
8. I cooperate with colleagues in planning instruction.	0	1	2	3	4
9. I actively seek out professional growth opportunities.	0	1	2	3	4
10. I uphold the laws and ethical codes governing the teaching profession.	0	1	2	3	4
11. I stimulate students' interests & curiosity.	0	1	2	3	4
12. I believe it is important to involve each student in learning.	0	1	2	3	4
13. I value both long term and short term planning.	0	1	2	3	4
14. I stay current with the evolving nature of the teaching profession.	0	1	2	3	4
15. I select material that is relevant for students.	0	1	2	3	4
16. I believe the classroom environment a teacher creates greatly affects students' learning and development.	0	1	2	3	4
17. I am successful in facilitating learning for all students.	0	1	2	3	4
18. I tend to encourage democratic interaction in the classroom and school.	0	1	2	3	4
19. I accurately read the non-verbal communication of students.	0	1	2	3	4
20. I engage in discussions about new ideas in the teaching profession.	0	1	2	3	4

0 = Strongly Disagree	1 = Disagree	2 = Neutral	3 = Agree	4 = Strongly Agree
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21. I view teaching as an important profession.	0	1	2	3	4
22. I select material that is interesting for students.	0	1	2	3	4
23. I provide appropriate feedback to encourage students in their development.	0	1	2	3	4
24. I understand that teachers' expectations impact student learning.	0	1	2	3	4
25. I view teaching as a collaborative effort among educators.	0	1	2	3	4
26. I engage in research-based teaching practices.	0	1	2	3	4
27. I create connections within subject matter.	0	1	2	3	4
28. I understand students have certain needs that must be met before learning can take place.	0	1	2	3	4
29. I am sensitive to student differences.	0	1	2	3	4
30. I communicate caring, concern, and a willingness to become involved with others.	0	1	2	3	4
31. I listen to colleagues' ideas and suggestions to improve instruction.	0	1	2	3	4
32. I take initiative to promote ethical and responsible professional practice.	0	1	2	3	4
33. I am punctual and reliable in my attendance.	0	1	2	3	4
34. I maintain a professional appearance.	0	1	2	3	4
35. I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence.	0	1	2	3	4
36. I respect the cultures of all students.	0	1	2	3	4
37. I communicate effectively with students, parents, and colleagues.	0	1	2	3	4
38. I honor my commitments.	0	1	2	3	4
39. I treat students with dignity and respect at all times.	0	1	2	3	4
40. I work well with others in implementing a common curriculum.	0	1	2	3	4
41. I am willing to receive feedback and assessment of my teaching.	0	1	2	3	4
42. I am patient when working with students.	0	1	2	3	4
43. I am open to adjusting and revising my plans to meet student needs.	0	1	2	3	4

0 = Strongly Disagree	1 = Disagree	2 = Neutral	3 = Agree	4 = Strongly Agree
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44. I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	0	1	2	3	4
45. I believe it is important to learn about students and their community.	0	1	2	3	4
46. I plan for the integration of knowledge, skills, and disposition within and across subject.	0	1	2	3	4
47. I do not believe in teaching by ability.	0	1	2	3	4
48. I believe grouping within a classroom should be frequently changed.	0	1	2	3	4
49. I am enthusiastic about the subject I teach.	0	1	2	3	4
50. Emotion is an important factor in learning.	0	1	2	3	4

What role do you think dispositions have in the teaching profession?

Demographic Information: Please respond to the following items.

1. Age _____
2. Gender (please circle your response) Male Female
3. Class Level
 Freshman
 Sophomore
 Junior
 Senior
 Graduate Student
4. Ethnicity
 African American
 Asian/Asian American
 Caucasian
 Hispanic
 Native American
 Other
5. Endorsement (please check all that apply)
 Early Childhood Unified
 Elementary
 Middle School
 Secondary Subject or Field endorsement _____
 K-12 (Art, Music, Health/Physical Education)
 Special Education

THANK YOU for completing the Wayne State College Teacher Disposition Survey!

Adapted from University of Nebraska at Omaha Teacher Disposition Index – 2006

PS 079

Teacher Dispositions Index Items	Conceptual Framework Principle	INTASC Principle
1. I stimulate students' interests.	1	1
2. I select material that is relevant for students.	1	1
3. I select material that is interesting for students.	1	1
4. I create connections to subject matter that are meaningful to students.	2	1
5. I believe a teacher must use a variety of instructional strategies to optimize student learning.	1	2
6. I believe that all students can learn.	1	2
7. I believe the classroom environment a teacher creates greatly affects students' learning and development.	3	2
8. I understand students have certain needs that must be met before learning can take place.	3	2
9. I believe it is my job to create a learning environment that is conducive to the development of students' self confidence and competence.	1	2
10. I provide appropriate feedback to encourage students in their development.	1	2
11. I understand that students learn in many different ways.	1	3
12. I believe it is important to involve all students in learning.	3	3
13. I understand that teachers' expectations impact student learning.	1	3
14. I am sensitive to student differences.	3	3
15. I respect the cultures of all students.	3	3
16. I am successful in facilitating learning for all students.	1	3
17. I demonstrate qualities of humor, empathy, and warmth with others.	3	5
18. I treat students with dignity and respect at all times.	3	5
19. I am patient when working with students.	1	5

20. I demonstrate and encourage democratic interaction in the classroom and school.	3	5
21. I am a thoughtful and responsive listener.	2	6
22. I communicate caring, concern, and a willingness to become involved with others.	3	6
23. I accurately read the non verbal communication of students.	1	6
24. I assume responsibility when working with others.	1	7
25. I view teaching as a collaborative effort among educators.	1	7
26. I am open to adjusting and revising my plans to meet student needs.	2	7
27. I believe it is important to learn about students and their community.	3	7
28. I cooperate with colleagues in planning instruction.	1	7
29. I value both long term and short term planning.	2	7
30. I listen to colleagues' ideas and suggestions to improve instruction.	1	7

Teacher Dispositions Index Items	Conceptual Framework Principle	INTASC Principle
31. I work well with others in implementing a common curriculum.	1	7
32. I view teaching as an important profession.	1	9
33. I am punctual and reliable in my attendance.	3	9
34. I maintain a professional appearance.	3	9
35. I honor my commitments.	3	9
36. I am willing to receive feedback and assessment of my teaching.	2	9
37. I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others.	3	9
38. I am committed to critical reflection for my professional growth.	2	9
39. I actively seek out professional growth opportunities.	2	9
40. I uphold the laws and ethical codes governing the teaching profession.	2	9
41. I stay current with the evolving nature of the teaching profession.	2	9
42. I engage in discussions about new ideas in the teaching profession.	2	9
43. I engage in research - based teaching practices.	2	9
44. I take initiative to promote ethical and responsible professional practice.	2	9
45. I communicate effectively with students, parents, and colleagues.	3	9

Note: Because the Teacher Dispositions Index is used for initial programs, the items are aligned with the INTASC Principles.

Alignment of the Teacher Dispositions Index Items with the Conceptual Framework and INTASC Principles

ABOUT THE AUTHORS

A native of North Carolina, James Osler was born and raised in the City of Medicine. An accomplished artist, Osler enjoys using art as a tool to empower others. He completed his B.A. at NCCU with a concentration in Studio. Osler adores teaching. He has always been interested in how information is delivered and continues to explore the many different methods, models, and modes of instruction. After completing a M.A. in Educational Technology he completed a doctorate in Technology Education at North Carolina State University (NCSU). He has authored a series of books and e-books on the creation of empowering entrepreneurial educational experiences. His research focuses on Fundamental Christian Education from the holistic perspective of Qualitative and Quantitative Instructional Design (Osler, 2010). He has authored the Online Graduate Program in Online Instructional Design that is currently a part of the Online Educational Technology Program in the NCCU School of Education. His interests include: a life filled with a love of Almighty GOD and ministry to his fellow man through: teaching, the research, and service. He has been awarded two of the highest honors at NCCU as an employee and as faculty: The Employee Recognition Award for Outstanding Service in 2001 and The University Award for Teaching Excellence in 2008.



Stacy Russell received her doctorate in Educational Leadership from Jones International University and is currently an Instructional Facilitator with Durham Public Schools. A strong advocate for retaining and sustaining new teachers, she involves her teachers in professional development, data talks, research-based teaching resources, problem-solving techniques and best practices to improve student achievement. Her professional interests focus on teacher dispositions, new teacher preparedness, inquiry-based learning and cooperative learning. Her current projects include district level professional development for new teachers and the development/implementation of new teacher orientation. In addition, she serves as a mentor for Bethesda Elementary School, and is a member of North Carolina Association of Educators (NCAE/NEA). She was recently honored with the Super Staff Award for her contributions to Bethesda's young girls P.E.A.R.L.S. Program.

