The Assessment of Preservice Teachers' Dispositions

David K. Griffin

Abstract

This paper reviews some of the approaches to defining and assessing dispositions in preservice teachers. A review of the literature is presented, followed by a discussion of issues relating to defining dispositions, and the importance of assessing dispositions in teacher candidates. Finally, the results of a study that included a sample of 15 preservice teachers who were assessed on the Educator Disposition Assessment by two independent reviewers are presented. Study limitations and possible future research methodologies are also discussed.

Keywords: dispositions, preservice teacher

David K. Griffin, Ed.D., BCBA-D is an Associate Professor at Nova Southeastern University, a Licensed School Psychologist and a Board Certified Behavior Analyst. He can be reached at griffida@nova.edu

With the seemingly ever-changing make-up of today's classrooms, there is an increasing focus on university programs' curricula that prepare future teachers to meet the unique needs of diverse students. Traditionally, these programs have been required to document that those who graduate demonstrate competence in basic standards, with the focus on the graduating candidates' abilities to understand and provide instruction relating to key academic areas.

In more recent times, however, the focus has broadened to include not only the assessment of pedagogy and academic preparation but that of teacher dispositions as well. Many accreditation organizations are now including the assessment of dispositions as part of the accreditation process. The Council for the Accreditation of Educator Professionals (CAEP), for example, requires that teacher education programs assess candidates' dispositions regularly (CAEP 2018), and demonstrate that candidates demonstrate various dispositions prior to graduation. Likewise, the Interstate New Teacher Assessment and Support Consortium (InTASC) Core Standards (2018) include several key elements that specifically address dispositions. For example, the focus of Standard 2 is on Learning Differences; "The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards" (InTASC Model Core Teaching Standards: A Resource for State Dialogue, 2011). Thus, with the ever-increasing focus on dispositions, teacher preparation programs recognize the importance of not only modeling appropriate dispositions but including dispositions at various stages in the overall curriculum (Da Ros-Voseles & Moss, 2007). To add to this, many teacher and preservice teacher evaluation instruments contain elements of dispositions (Marzano & Brown, 2009; Danielson, Axtell &

McKay, 2009). Finally, Nixon Dam, and Packard (2010) reported that over 50 percent of non-contract teacher renewal was specifically related to the teacher not demonstrating appropriate, positive dispositional behaviors.

The assessment of dispositions is not as clear cut as assessing a candidate's ability to teach academic skills, since there are various definitions of dispositions, and lack of agreement regarding which specific dispositions are important and need to be assessed. As such, the focus of dispositions to be assessed is usually the responsibility of the institution overseeing the teacher preparation program, or the accreditation agency. Furthermore, as Notar, Riley, and Taylor, (2009) point out, since dispositions are not part of content knowledge, they are not always detectable.

The actual assessment of dispositions has been widely debated in the teacher education profession over the past few years (Welch, Pitts, Tenini, Kuenlen, & Wood, 2010). Thornton (2006) points out that despite the fact that dispositions are essential elements of teacher preparation, they are frequently neglected and not incorporated into teacher education programs. Yet, as Cummins and Asempapa (2013) point out, if teacher education programs first clearly define crucial teacher and learning dispositions, courses could be tailored to include the fostering and assessment of such dispositions. At the same time, Osguthorpe (2013) stated "It is perplexing that many teacher education programs assess teacher candidates on something (dispositions) that such programs might not seek to actually teach or develop" (p 21). Furthermore, Stewart and Davis (2005) indicate even though colleges have identified important dispositions, there is little evidence to show that programs actually teach candidates how to further develop or enhance these dispositions. Since the goal of teacher preparation

programs is to produce highly qualified teachers, Dottin, (2009) reports that dispositions, in addition to knowledge and skills, should be considered an important component of the preparation program. However, as Osguthorpe (2013) states, despite the fact that teacher preparation programs are required to follow various standards that include dispositions, these programs have yet to develop a consistent approach to disposition development and assessment.

Another challenge faced by many teacher preparation programs is that many, if not all courses are taken in an online format. A teacher candidate may successfully complete the academic requirements of the program online, yet the opportunity to observe the candidate teach in the classroom does not occur until the internship phase. This is often the final requirement for graduation, and it is possible for a candidate to be placed in a classroom who does not demonstrate appropriate teaching dispositions. As such it is the responsibility of the institution to develop creative ways to assess (and hopefully make positive contributions to) the teacher candidate's teaching performance which includes a wide variety of desired classroom dispositions.

Defining Dispositions

One of the first tasks teacher preparation programs must address prior to assessing dispositions is to identify and define the specific dispositions of interest and importance. A review of the literature provides one with an abundance of terms, definitions, and descriptions of what are considered to be desirable teacher dispositions. However, as Welch et al., (2010) indicate, there is a lack of operational definitions of behaviors thought to be related to teacher dispositions which in turn limits teacher preparation programs from implementing effective assessment and evaluation.

In 2008, The National Council for Accreditation of Teacher Education (NCATE) published a set of professional standards as a guide for teacher education programs which included references to professional dispositions. The manual stipulates that graduating teacher candidates need to possess dispositions to work successfully with all children and demonstrate professional dispositions that facilitates student learning.

Even though specific measurable, operational definitions were not included, NCATE provided a general description of important dispositions that teacher candidates should demonstrate caring, honesty, fairness, empathy respectfulness, responsibility, and thoughtfulness. Included also is the belief that all children can learn, and the creation of caring and supportive learning environments (The National Council for Accreditation of Teacher Education, 2008).

Jensen, Whiting, and Chapman (2018) summarized their research regarding dispositions teacher educators should display when working with children from diverse backgrounds. These include empathy, meekness, social awareness, inclusion, and advocacy. They summarized, in their study, research that defines these 5 disposition areas and how they can be identified in teachers. Based on their review of the research, these authors developed the "Multicultural Teacher Dispositions Scale (MTDS)". This tool is discussed later in this paper.

Several researchers attempt to provide definitions of teacher-related dispositions. Katz and Raths (1986), for example, define dispositions as "attributions which summarize a trend of a teacher's actions across similar contexts" (p. 3). Taylor and Wasicsko, (2000) define dispositions as the personal qualities or characteristics that are possessed by individuals, including attitudes, beliefs, interests, appreciations, values, and modes of adjustments. Notar, Riley, and Taylor (2009) include enthusiasm, sensitivity, responsibility, commitment, professionalism, skillful

preparation, a sense of respect for others, communication, and appropriate dress, deportment and demeanor. They add patience, determination, and courage to the list of important dispositions teacher candidates should demonstrate. Bauer & Thornton (2013) included several dispositions that were present in successful teachers, including creativity, and the ability to be critical. Adding to this, Choi, Benson, and Shudak (2016) state "…dispositions are those internal conditions (attitudes, values, beliefs, thoughts, etc.) that influence our external behaviors (actions and interactions with students and others) (p 72). Finally, Usher (2002) included the following when discussing dispositions; having empathy, or the ability to understand and accept another person's point of view, and a positive view of others, or believing in the worth, ability, and potential of others.

One issue is, again, not all agree on how to define the dispositions thought to be important in teacher education programs or provide a summary of observable behaviors that can be linked to specific dispositions. The assessment of "professionalism" for example, might include certain behaviors for one observer, but not for another. Thus, in order to obtain valid and reliable measures of teacher dispositions, specific behaviors need to be identified and operationally defined, allowing the evaluator to document if the specific behavior is demonstrated or not.

Even though not all agree on specific definitions of important teacher dispositions, as Cummins and Asempapa (2013) remind us there is agreement that certain dispositions are essential for teachers to be successful in the teaching profession. According to Stewart and Davis (2005) a common thread seems to be that of respect, enthusiasm, efficacy, communication skills, and grammar correctness (p 37). Finally, since definitions and descriptions of dispositions seem

to be left up to the teaching institution, and a document listing specific, appropriate teacher dispositions is not provided by accrediting agencies, many teacher preparation programs have chosen to identify a set of dispositions thought to be crucial in the classroom and have attempted to develop an approach to assessing them. However, once again, as Murray (2007) points out, the assessment of dispositions will have little value without valid and reliable measures. Issues relating to the reliability/validity of the instrument used in the assessment of dispositions will often lead to questionable results.

The Importance of Assessing Dispositions

Apart from complying with various accreditation standards, one key reason for addressing and assessing dispositions for teacher education candidates is that there is a relationship between teachers' dispositions and the quality of student learning (Notar, Riley, and Taylor, 2009). These authors feel it is important for teacher preparation programs to objectively assess candidates' dispositions both in internships and coursework. Likewise, Chickering and Gameson (1987) indicate that teacher dispositions have a direct relationship to student learning. One specific disposition mentioned was having respect for diverse ways of learning. Related to this, Dee and Henkins (2002) concluded that understanding preservice teachers' perceptions of diversity is the first step towards driving programmatic change.

Continuing with the importance of assessing classroom dispositions, Wilkerson (2006) went as far to indicate "dispositions are, in the long run, more important than knowledge and skills" (p. 2), while Sherman (2006) suggested that a teacher's overall classroom approach may be more important than his/her pedagogical skills and knowledge when it comes to learning. And, as Johnston, Almerico, Henriotte, & Shapiro (2011) indicate, teacher candidates' professional dispositions are predictors of overall teaching effectiveness.

Approaches to Assessing Dispositions

The first question one might ask is "Is it possible to assess dispositions?".

An accurate assessment of anything begins with a clear, precise definition of the phenomena being measured. Before specific definitions area agreed upon, there must be an agreement on which dispositions are to be measured. Add to this the ability to actually observe what one wants to measure, and an assessment/data collection tool that is valid and reliable. Various assessment approaches have been successfully utilized to assess a variety of constructs and observable behavior, including surveys, checklists, interviews, self-reports, portfolios, standardized assessments/test scores, and so on. Several of these assessment approaches have been used in a variety of teacher preparation programs as well, specifically relating to assessing dispositions (Conderman & Walker, 2015, Notar, Riley, & Taylor, 2009, Choi, Benson, & Shudak, 2016, DiGiacinto, Bugler & Wayda, 2017). Phelps (2006) reports that the best approach to assessing dispositions is to physically observe preservice teachers in the classroom. She feels that indicators of appropriate teaching dispositions include caring about student learning and planning creative lessons. Finally, Wasicsko (2007) discusses the importance of using a self-evaluation approach in combination with an external evaluator. Here, the preservice teacher can compare his or her perceptions of his or her own dispositions to what an evaluator observes.

Within the past several years, many teacher preparation programs have developed surveys and/or checklists/rating scales to focus on the assessment of pre-service/teacher dispositions. Choi, Benson, & Shudak, (2016) used a 19-item rating scale that included a 3-point rubric (1 = below expectations to 3 = exceeds expectations) in their approach to assessing dispositions. Here, candidates were rated twice by both university and field supervisors. They conclude in their findings that unless the term "dispositions" is clearly defined, it cannot be

reliably and validly assessed. Frederiksen, Cooner, and Stevenson (2012) used a quantitative non-experimental approach to assess perceived dispositions of preservice teachers towards urban and nonurban settings in addition to measuring the effectiveness of the internship in these settings.

Welch, Napoleon, Hill, and Roumell (2014) developed The Virtual Teaching Dispositions Scale (VTDS) to assess teacher dispositions in a virtual setting. The VTDS assesses teacher-related dispositions in three basic domains: Social Presence, Pedagogical Presence, and Expert/Cognitive Presence. For each domain, teachers rate themselves on several descriptive items according to a 4-point Likert scale (1 = Very untrue of me (includes having no experience in that situation), 2 = Not really true of me, 3 = Somewhat true of me, 4 = Very true of me). For example, one specific item in the Social Presence domain is "I am empathetic to the needs of my students". The authors discussed their pilot study using the VTDS and reliability measures for each domain.

As mentioned prior, Jensen, Whiting, and Chapman (2018) developed the Multicultural Teacher Dispositions Scale (MTDS), Phase 2. This edition of the assessment contained 26 "agreement" items relating to the dispositions of empathy, meekness, social awareness, inclusion, and advocacy. After piloting this version, and compiling the data collected, the authors reported that continued refinement is ongoing.

After considerable research, Almerico, Johnston, Henriott, and Shapiro (2010) developed the Educator Disposition Assessment (EDA). This evaluation tool uses specific identifiers to assess candidates on several disposition areas including: Effective Oral and Written Communication Skills, Displaying a Positive and Enthusiastic Attitude, Preparedness in Teaching and Learning, Appreciation for Cultural/Academic Diversity, Initiative, and

Social/Emotional Intelligence. Each of these categories is further broken down using a 3-point Likert-scale with clearly defined descriptive indicators as part of a scoring rubric that are rated as; "0 (Needs Improvement)", "1 (Developing)" or "2 (Meets Expectations)". The rater uses the scoring rubric as a descriptive guide to evaluate the various disposition elements in each category.

The psychometric properties relating to this instrument (and other disposition assessment tools) are discussed in detail in other studies (Johnston, Almerico, Henriott, & Shapiro, 2011), (Johnston, Wilson, & Almerico, 2018).

Purpose of the Present Study

This purpose of this study is to present the results of a study that included 15 preservice teachers who were assessed on the Educator Disposition Assessment (EDA) (Almerico, Johnston, Henriott, & Shapiro, 2010) by two independent raters between February 2020 and April 2020. Additionally, Inter-Rater Reliability measures evaluate the degree to which the raters agree/disagree on the student assessments, and the individual EDA categories.

<div align="center">

Method

</div>

Sample

All preservice teachers enrolled in the Undergraduate Teacher Education Program at a private, not-for-profit University in South Florida are required complete, as a final part of their preparation program, a 14-week student teaching internship. This capstone event occurs just prior to graduation. They work collaboratively with the classroom cooperating teacher and receive ongoing supervision from a clinically trained University Supervisor. Initially, they observe and take notes in the classroom, and gradually take on more classroom responsibilities until they finally take full responsibility for the classroom. They are evaluated at several points during the internship by both the cooperating teacher and University supervisor. Additionally,

the cooperating teacher and University supervisor meet to discuss their individual evaluations, and again meet with each teacher candidate to review the evaluation results. This study presents the evaluation results of 15 teacher candidates at the final stage of their internship as related to dispositions.

Instrument

The Educator Disposition Assessment (EDA) was used as a comprehensive measure of dispositions (Almerico, Johnston, Henriott, & Shapiro, 2010). This tool is summarized in the above section. The cooperating teacher rated each intern on the EDA during the final week of internship, and the University Supervisor rated the intern during his/her final observation. Both the cooperating teacher and University Supervisor received training on the EDA prior to administration. All assessment data were entered into LiveText, which is password protected. No identifying information was entered or recorded into LiveText, only EDA evaluation results. It should be noted that the EDA Likert categories were recoded to "1 (Needs Improvement)", "2 (Developing)", and "3 (Meets Expectations)" for the purpose of analysis.

<div align="center">

Results

</div>

Review of the data collected by the University Supervisor indicated that most teacher candidates (14) scored "Meets Expectations" on the many elements of this assessment. The exceptions were that one student scored "Developing" on three areas of this assessment (Positive and Enthusiastic Attitude, Self-regulated Learner Behavior/Initiative, and Social and Emotional Intelligence).

Review of the data collected by the Cooperating teacher indicated that, again, most teacher candidates (13) scored "Meets Expectations" on the many elements of this assessment. The exceptions were that one teacher candidate scored "Developing" on Appreciation for Culture

and Academic Diversity, and a second teacher candidate scored "Developing" on Self-regulated

Learner Behavior/Initiative.

Next, evaluation results were compared between the cooperating teacher and University

Supervisor to compile inter-rated reliability. The table below summarizes the results.

Table 1

Data Summary

EDA Category	University Supervisor Rating (Mean/Median) (n= 15)	Cooperating TeacherRating (Mean/Median) (n= 15)
Demonstrates Effective Oral Communication Skills	3.00/3.00	3.00/3.00
Demonstrates Effective Communication Skills	3.00/3.00	3.00/3.00
Demonstrates Professionalism	3.00/3.00	3.00/3.00
Demonstrates a Positive and Enthusiastic Attitude	2.93/3.00	3.00/3.00
Demonstrates Preparedness in Teaching and Learning	3.00/3.00	3.00/3.00
Exhibits an Appreciation of and Value for Culture and Academic Diversity	3.00/3.00	2.933/3.00
Collaborates Effectively with Stakeholders	3.00/3.00	3.00/3.00
Demonstrates Self-regulated Learner Behavior/Takes Initiative	2.933/3.00	2.933/3.00
Exhibits the Social and Emotional Intelligence to Promote Personal and Educational Goals/Stability	2.933/3.00	3.00/3.00

When looking at the Inter-rater reliability on each EDA category for individual preservice teachers, there was full agreement by both raters on most assessment items. The exceptions were as follows:

For teacher candidate 6, the cooperating teacher rated all item a score of 3 ("Meets expectations), while the University supervisor rated the same student a score of 2 ("Developing") on three of the EDA categories (Positive and Enthusiastic Attitude, Demonstrates Self-regulated Learner Behavior/Takes Initiative, and Exhibits the Social and Emotional Intelligence).

For teacher candidate 9, the University supervisor rated all EDA items a score of 3 ("Meets expectations), while the cooperating teacher agreed, with the exception of EDA category 6. Here s/he rated this item (Exhibits an Appreciation of and Value for Culture and Academic Diversity) a score of 2 ("Developing). Additional statistics computed on the data did not reveal any statistically significant differences when looking at overall Inter-rater reliability.

Discussion

As can be seen in the data summary and table, all teacher candidates received high ratings from both the cooperating teacher and University Supervisor. In only five occasions were ratings less than 3 given; one preservice teacher received ratings of 2 (Developing) on Positive and Enthusiastic Attitude, Self-Regulated Learner Behavior/Initiative, and Social/Emotional Intelligence from the University Supervisor; a second received a rating of 2 (Developing) on Demonstrates Self-regulated Learner Behavior/Takes Initiative from the University Supervisor; a third preservice teacher received a rating of 2 (Developing) on Appreciation of and Value for Culture and Academic Diversity from the cooperating teacher. These three preservice teachers received ratings of "3" in all areas by the second rater. No preservice teacher received a rating of "Needs Improvement" on any of the EDA categories.

Study Limitations

One limitation of this study is that the preservice teachers who were assessed on the EDA only had one assessment point (at the end of internship). It is possible that they demonstrated the various dispositions (as measured by the EDA) prior to beginning their education program or developed them as they progressed through the program. It would be beneficial to administer the EDA at program entrance point and then again at exit point to evaluate any changes in dispositions. Thus, it is not possible to state that the education program and/or internship was the result of the high ratings they received overall. Additionally, it would be beneficial to have the preservice teachers rate themselves on the EDA and compare their responses to those from the cooperating teacher and University Supervisor. Furthermore, it would be important to recruit a control group (perhaps students in programs other than teacher education) and compare pre/post results between groups. Finally, this study evaluated 15 preservice teachers in one localized area. This is a very small sample size, and external validity is an issue. A larger sample size, and wider study region may produce different results.

References

Almerico, G., Johnston, P., Henriott, D., & Shapiro, M. (2011). Dispositions assessment in teacher education: developing an assessment instrument for the college classroom and the field. *Research in Higher Education Journal,* Vol 11. Retrieved from http://aabri.com/manuscripts/10665.pdf

Bauer, D., & Thornton, H. (2013). A case analysis of middle level teacher preparation and long-term teacher dispositions middle level teacher preparation and responsive dispositions. *Research in Middle Level Education Online, 37*(3), 1–19. Retrieved from http://files.eric.ed.gov/fulltext/EJ1032360.pdf

Borko, H., Liston, D., & Whitcomb, J. A. (2007). Apples and fishes: The debate over dispositions in teacher education. *Journal of Teacher Education, 58*, 359-364.

Chickering, A. W., Gamson, Z. F., & American Association for Higher Education, W. C. (1987). Seven principles for good practice in undergraduate Eeducation. *AAHE Bulletin,* 3-7.

Choi, H., Benson, N. F., & Shudak, N. J. (2016). Assessment of teacher candidate dispositions: Evidence of reliability and validity. *Teacher Education Quarterly*, Summer, 71-89.

Conderman, G., & Walker, D. A., (2015). Assessing dispositions in teacher preparation programs: Are candidates seeing the same thing? *The Teacher Educator*, *50,* 215-231

Council for the Accreditation of Educator Professionals. (2018). Retrieved from http://caepnet.org/standards/standard-1

Cummins, L. & Asempapa, B. (2013). Fostering teacher candidate dispositions in teacher education programs. *Journal of the Scholarship of Teaching and Learning*, *13*, 3, 99-119.

Dee, Jay R & Henkin, Alan B. (2002). Assessing dispositions toward cultural diversity among

    Preservice teachers. *Urban Education; Thousand Oa*ks, 37, 22-40.

Da Ros-Voseles, D., &Moss, L. (2007). The role of dispositions in the education of future

    teachers. *Young Children, 62,* 5, 90-98.

DiGiacinto, K. L., Bugler, S. M., & Wayda, V. (2017). Rethinking PETE Program admissions

    to include teacher candidate dispositions. *The Physical Educator, 74*, 63-84.

Dottin ES (2009). Professional judgment and dispositions in teacher education. Teacher

    Education, 25(1):83-88.

Frederiksen, H., Cooner, D.. & Stevenson, C. (2012). Assessing Teacher

    Dispositions in pre-service teachers. *Journal of College Teaching & Learning (Online)***;**

    Littleton. Vol. 9, Is. 1, 39.

InTASC Model Core Teaching Standards: A Resource for State Dialogue, (2011). Retrieved

    from https://www.ccsso.org/sites/default/files/2017-

    11/InTASC_Model_Core_Teaching_Standards_2011.pdf

Interstate New Teacher Assessment and Support Consortium (2018). Retrieved from

    http://www.ecu.edu/cs-educ/teached/upload/INTASCStandardsIndicators.pdf

Jensen, B; Whiting, E. F., & Chapman, S. *Journal of Psychoeducational Assessment*

    Vol. 36, Iss. 2, (Mar 2018): 120-135. DOI:10.1177/0734282916662426

Johnston, P, Wilson, A., & Almerico, G., (2018). Meeting psychometric requirements for

    disposition assessment: Valid and reliable indicators of teacher dispositions. *Journal*

    of Instructional Pedagogies, *21*. Retrieved from

    http://www.aabri.com/manuscripts/182847.pdf

Johnston, P, Almerico, G., Henriott, D., & Shapiro, M. (2011). Descriptions of dispositions for

 assessment in pre-service teacher education field experiences. *Education, 132*, 2.

 Retrieved from https://www.questia.com/library/journal/1G1-278759337/descriptions-of-

 dispositions-for-assessment-in-pre-service

Katz, L. G., & Raths, J. D. (1986). Dispositional goals for teacher education: Problems of

 identification and assessment. (ERIC Document Reproduction Service No. ED2722470)

Martins, N., & Ungerer, L. (2017) *Africa Education Review (14)* 156-73

 DOI:10.1080/18146627.2017.1294971

Marzano, R. & Brown, J. (2009). *A handbook for the art and science of teaching*. Association for

 Supervision and Curriculum Development.

Murray, F. B. (2007). Disposition: A superfluous construct in teacher education. *Journal of*

 Teacher Education, 58, 381-387

National Council for Accreditation of Teacher Education (NCATE) (2001). *Professional*

 standards for the accreditation of schools, colleges, and departments of education.

 Washington, DC: Author

National Council for Accreditation of Teacher Education (NCATE). *Professional standards*

 2008. (2008) Retrieved from http://www.ncate.org/~/media/Files/caep/accreditation-

 resources/ncate-standards-2008.pdf?la=en

Nixon, A., Dam, M. & Packard, A. (2010). Teacher disposition and contract non-renewal.

 Planning and Changing, 41, 210-219.

Notar, C. E., Riley, G. W., & Taylor, P. W. (2009). Dispositions: Ability and assessment.

 International Journal of Education, 1, 1, 1-14.

Osguthorpe, R. D. (2013). Attending to ethical and moral dispositions in teacher education. *Issues in Teacher Education*, *22*, 1, 17-28.

Phelps, P. H. (2006). The Dilemma of Dispositions. *The Clearing House: A Journal of Educational Strategies, issues, and Ideas*. 79:4, 174-178, DOI 10.3200/TCHS.79.4.174-178.

Sherman, S. (2006). Moral dispositions in teacher education: Making them matter. *Teacher Education Quarterly*, Fall, 41–57. Retrieved from http://files.eric.ed.gov/fulltext/EJ795225.pdf

Stewart, P. & Davis, S. (2005) Developing Dispositions of Preservice teachers through Membership in Professional Organizations. *Journal of Authentic Learning*, 2, 1, 37-46.

Taylor, R. & Wasicsko, M. (2000). *The dispositions to teach.* Paper presented at SRATE, Kentucky.

Thornton, H. (2006). Dispositions in Action: Do Dispositions make a difference in Practice? *Teacher Education Quarterly,* 33, 2, 53-68.

Usher, D. (2002, November). *Arthur Combs' five dimensions of helper belief reformulated as five dispositions of teacher effectiveness.* Paper presented at the meeting of the First Annual Symposium on Educator Dispositions: Effective Teacher--Effective Person. Eastern Kentucky University.

Wasicsko, M. M. (2007). Dispositions—A perceptual approach. In M.E. Diez & J. Raths (Eds.), *Dispositions in Teacher Education* (pp. 3-29). Information Age Publishing, Inc.

Welch, A. G., Napoleon, L., Hill, B., &Roumell, E. (2014). Virtual teaching dispositions scale (VTDS): A multi-dimensional instrument to assess teaching dispositions in virtual classrooms. *MERLOT Journal of Online Learning and Teaching, 10* (3) 446-467.

Welch, F. C., Pitts, R. E., Tenini, K. J., Kuenlen, M. G., & Wood, S. G. (2010). Significant

issues in defining and assessing teacher dispositions. *The Teacher Educator, 45*(3), 179–

201. http://doi.org/10.1080/08878730.2010.489992

Wilkerson, J. (2006). Measuring teacher dispositions: Standards-based or morality-based? *The*

Teachers College Record. Retrieved from

http://www.tcrecord.org/content.asp?contentid=12493