

Disposition Profile Inventory: An Assessment Tool for Measuring the Professional Attitudes and Behaviors of Teacher Education Candidates

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Introduction

As far back as 1918, Franklin Bobbitt, the first educator to underscore the importance of curriculum planning in education, stressed the need for educators to transcend mere facts and knowledge acquisition. Bobbitt (1918) argued fervently that “education that prepares for life is one that prepares definitely and adequately ...the abilities, attitudes, habits, appreciations and forms of knowledge that men [and women] need (P. 42).” Issues of attitude and habit have long been recognized as essential constructs impacting school effectiveness since the beginning of mass education in the United States. It should come as no surprise then that the National Council for the Accreditation of Teacher Education (2000) standards identify disposition as one of the three fundamental and critical skills that all candidates preparing to be teachers must acquire.

Disposition theorizing

Educators of most teacher preparation programs in the United States today are aware of the importance of including appropriate disposition skills in their preparation programs. Although few methodologies and instructional materials are available for teaching disposition in our colleges, they have largely faced the challenge of how best to conceptualize and measure the construct. What exactly is it? How can we define it in a way that is measurable over time, and most important, how can we inculcate it in pre-service teachers to elevate their teaching skills to meet the learning challenges of the 21st century learner? (Dewey, 1922, p. 41; Ryle, 1949; Siegel, 1997; Facion, Facion, & Sanchez, 1992; Perkins, Jay, & Tishman, 1993; and, Costa & Kallick, 2000). As Whaley (1999) aptly notes, “It is generally more straightforward to establish indicators of knowledge and performance for new teachers than it is to determine the disposition of a teaching candidate. The disposition of a professional educator, albeit extraordinarily important, is more abstract and, consequently, is oftentimes considered in a more capricious or subjective fashion (p.94).”

Based on effective teaching practices, Taylor and Wasicsko (2004) at Eastern Kentucky University find that “dispositions are often defined as the personal qualities or characteristics that are possessed by individuals, including attitudes, beliefs, interests, appreciations, values, and modes of adjustment (p. 2).” Relying on the 1996 Webster’s dictionary, Whaley (1999) defines disposition as the “natural mental and emotional outlook or mood; it is a characteristic attitude (P. 95).” At a recent disposition workshop we attended in Washington State, one educator described the construct as the “fire and passion for teaching.” (OSPI of Washington, April, 2004). In the words of the workshop facilitator, “disposition leaks out in how we treat others.” The conceptualization of disposition in such a language and structure clearly suggests the broad, covert, and rather complex nature of the construct. To underscore the complex nature of the construct, Whaley (1999) states, “We know the appropriate disposition for an educator when we see it or otherwise experience it. We especially recognize instances when appropriate disposition is lacking. But ... do we really?” (p. 94).

Based on our review of the related literature, it appears there is no single definition of disposition that most educators prefer, much less agree on. Some educators define it so broadly as to include the universe of the pre-service candidate's attributes in professional and non-professional settings, while other educators pick and choose those teacher attributes they deemed directly related to positive student achievement. Thus, we are faced with a less than common vocabulary when it comes to defining disposition, an all-too-familiar situation for educational theory and practice. Dealing with the many different and confusing definitions of the term "curriculum" three decades ago, Hosford reminded us in his book, An Instructional Theory- A Beginning, that " The use of a precise vocabulary would eliminate many of the misunderstandings too often provoked by the use of the same words with different meanings." (Hosford, 1973, p.15-16). We are well advised to heed Hosford's advice when it comes to the issue at hand.

To make disposition meaningful and manageable for those who teach pre-service teachers, many colleges have found the categorization of the construct into subsets or domains of the pre-service teacher's behaviors and beliefs as the most useful means to achieve their dispositional outcomes. The Schulte, Edick and Edwards' two-level subscale categorization of the construct remains as our best example. Purdue University School of Education, on the other hand, divides disposition into seven domains: Instructional planning, preparation, and implementation (with 10 self attributes); Content Knowledge (with 4 self attributes); Problem-Solving (with 3 self attributes); Educational Research (with 3 attributes); Technology (with 3 attributes); Special Needs (with 11 attributes); and Diversity (with 6 attributes). (Retrieved from Purdue University, <http://education.calumet.edu/standards/standards01.htm>). Teacher education trainers at Alverno College Institute/INTASC Academy, Milwaukee, subdivide the construct into five subscales: respect; willingness to work hard; fairness and honest; tolerance for ambiguity; and communication/social interaction (2004, Alverno Summer Institute).

Currently, measurement operations generated in this area of study focus on subjectively interpreting the pre-service teacher's self-descriptive behaviors and beliefs based on goals formulated by state and/or national educational mandates. To objectively assess the disposition of pre-service teachers, Schulte, Edick and Edwards (2004) at the University of Nebraska, Omaha, have developed a 45 item statement instrument based on the Interstate New Teacher Assessment and Support Consortium (INTASC) principles of education. The Teacher Dispositions Index (TDI) is categorized into two domains: 1) Student-Centered Subscale (with 25-item statements) and 2) Professionalism, Curriculum-Centered Subscale (with 20-item statements). The subscale item statements are a conglomerate set of self-descriptive professional attributes of habitual and attitudinal belief statements, with which respondents must strongly agree, agree, disagree or strongly disagree. Thus far, the TDI is the most objective instrument we have found in the literature on this subject.

Research Purpose

While the sub-categorizations of disposition into several domains have assisted teacher preparation programs with conceptualizing and operationalizing the construct, we strongly argue for fewer common but comprehensive domains that most educators can find constructive, effective and also agree on. We identify 1) open-mindedness, 2) self-reflection, 3) curiosity and 4) social-justice as the domains that recur in most of the studies we reviewed. Second, these identified domains reflect the various attitudinal labels currently revealed in the literature. Having identified the four disposition domains, our purpose for conducting this study was to determine the extent to which items of each domain are valid and reliable in assessing the disposition of pre-service teachers in our teacher preparation program.

METHOD

Participants for the Validity Study

The sample group used for the validity study was drawn from the Master Teacher Graduate program at Central Washington University. From a population of about 90 master teachers, 24 were selected to participate in the transactional judging process. The participants entailed 20 females and 4 males. All participants had P-12 teaching experience ranging from 1 year to 10 years, except one participant who had 15 years of teaching experience.

Subjects of the Reliability Study

The sample group used for the reliability study was drawn from the teacher preparation program at Central Washington University. From a population of about 2000 teacher trainees, 60 were selected based on their standing in the program. Of the 60 subjects, 51 completed the test-retest process and thus were included in the study. Thirty-five were female while 16 were males. All of the selected subjects had completed their first level or the foundational stage of the professional sequence portion of the teacher preparation program, and were in the mid-level or effective teaching stage of the program. All had completed some public school experience in the form of a practicum and early in-school experience.

Instrumentation

We designed the “Disposition Profile Inventory” (DPI) to measure the broad spectrum of pre-service teachers’ dispositions regarding both their personal demeanor and professional attitudes, while the instrument itself is short and manageable. The DPI is categorized into four dispositional phases or domains: open-mindedness; self-reflection; curiosity; and social justice. These four major domains consistently appeared in most of the literature we reviewed and they encapsulate most of the many varied dispositional attributes we came across in the literature.

To develop relevant attributes for assessing each of the 4 dispositional domains, 24 graduate students in our Master Teacher program were presented with the Schulte, Edick, Edwards & Mackiel’s (2004) Teacher Disposition Index (TDI) and asked to judge which statement item or attribute best describes one or more of the 4 domains listed above (which are open-mindedness, self-reflection, curiosity and social justice). Through a Transactional Analysis process, the master teachers reviewed each item statement of the DPI and made a judgment regarding which domain the item best describes. Thus, based on their best judgment, each participant selected the items which best describes each of the four domains. We pre-determined that those attributes with a cluster factor of .5 (50%) or more would be selected for each dispositional domain, while we would reject items selected by less than 50% of the participants in the validity study.

Upon completing the item selection phase of the instrument development, the graduate participants were then asked to select from the list of common personality traits or attributes that in their judgment best describes each of the four dispositional domains. First, we presented the graduate participants with a definition of each dispositional domain and then asked the participants to develop a list of teacher behaviors based on our definitions. The following provides the definitions and common personality traits of the four domains.

Disposition Domains

For the purpose of our study, we define disposition operationally as the repertoire of behavior propensities regarding teaching and learning of the pre-service teacher. Such behavior propensities can be already ingrained through beliefs, or inculcated through professional training. This definition is consistent with Whaley’s (1999) in so far as he describes the construct as “prevailing personal beliefs as shown in behavior and relationships with others (p. 95).” Our view of the term is aligned with Ritchhart’s (2002) notion of the construct as “... characteristics that animate, motivate, and direct our abilities toward good and productive thinking and are recognized in the patterns of our frequently exhibited, voluntary behavior (p. 21).” The dispositional domains are operationally defined as well:

1. Open-mindedness: It is an active perspective that allows the individual to be flexible and willing to consider, if not try out, new ideas. An open-minded person develops the capacity to generate “alternative options and explanations, and looking beyond the given and expected.” Ritchhart, (2002, p.27). The person thinks critically about issues that confront her/him and s/he is capable of entertaining far reaching ideas, even if remote and unrelated (Kong, 2004). According to the research participants, the common personality traits for this construct are as follows:

[The candidate is] understanding, tolerant, fair, interested in things, flexible, open to other alternatives, very receptive to ideas, patient, a good listener, able to provide constructive feed back, able to admit own mistakes, and capable of considering the feelings of others.

2. Self-Reflection: It is an introspective process that allows the individual to assess her/his thinking, in this case, about teaching and learning. To create positive impact on learners, teachers must be able to

self-regulate and both evaluate and direct their own thinking about their professional performance in the classroom. According to the research participants, the common personality traits for this construct are as follows:

[The candidate is] introspective, perceptive, deep-thinking, contemplative, meditative, self-efficacious, speculative, analytical, insightful, adaptable to various situations, seeking improvement, and able to use assessment constantly & extensively.

3. Curiosity: It is innate and intellectual, existing in both the teacher and learner. It is the individual's desire to exploit an idea to its roots. Curiosity "involves finding the interesting and puzzling in the everyday, the mundane, and the ordinary, as well as in the unexpected." (Ritchhart, 2002). According to the research participants, the common personality traits for this construct are as follows:

[The candidate should be] self-motivated, persistent, intrigued by what people say.

[The candidate] shows interest and is eager, inquisitive, inquiring, pleasurable, full of wonder, skeptical, adventurous, searching, investigates, and discovers.

4. Social justice: It is the process of developing a sense of dealing with learners in an equal or equitable manner as the social setting may require. Acquiring a sense of justice requires the teacher to sharpen her/his skills in distinguishing between fact and fiction, ability to weigh evidence and make reasoned judgments. According to the research participants, the common personality traits for this construct are as follows:

[The candidate is] fair, impartial, even-handed, unbiased, lawful, has sense of equity, has traditional values, kind, supportive, honest, reasonable, sympathetic, democratic, admirable, accessible, proportional in judgment, has integrity, law-abiding, believes in liberty and rules and regulations, has situational awareness and balance of righteousness, provides opportunity for growth.

The DPI Instrument

The disposition instrument, the Disposition Profile Inventory (DPI), is a 29 item statement that measures the disposition of pre-service candidates in four domains: 9 statements assess "Open-Mindedness"; 7 statements assess "Self-Reflection"; 4 statements assess "Curiosity"; and 9 statements assess the "Social-Justice" of candidates. To test the disposition of teacher candidates, subjects were presented with the selected statements under each domain and then asked to rate themselves between 1 and 5 points regarding each statement; 1 represents the emergence of the dispositional domain while 5 represents high demonstration of the domain as perceived by the candidate.

RESULTS & DISCUSSION

Table 1 and 2 depict the results of the cluster analysis of both the Professional-Centered Subscale and the Student-Centered Subscale designed by Schulte, Edick and Edwards. (2004) as judged by the graduate students in the Master Teacher Program. Columns to the right of the table depict the percentage of response by the participants for each item descriptor of the DPI. For example, item one was judged by 95.8% of the respondents to best describe "self-reflection" domain, while only 4.2% of the participants chose the same item as best describing "open-mindedness" domain. Items receiving no vote from the participants were rejected outright from the design. Items receiving less than 50% vote for any of the domains were rejected during the second phase of the item selection analyses.

As shown on table 3, items with more than 50% cluster rate were selected to best describe each of the four domains. Thus the first domain, "open-mindedness", resulted with nine item descriptors receiving 50% or more votes. "Self-Reflection" domain resulted with seven item descriptors with 50% or more votes, while "curiosity" domain only resulted with four item descriptors with 50% or more votes. "Social-Justice" domain resulted with seven item descriptors with 50% or more votes.

Data collected from the 14-days test-retest procedure were used to assess the reliability of the DPI. Collected data were subjected to a descriptive analysis test first and then a Pearson correlation coefficient test. A Statistical Package for Social Sciences (SPSS) soft-ware was used to conduct the statistical analyses.

The descriptive analysis yielded a pretest mean ranging from 8.2157 for curiosity domain to 41.3922 for self reflection, while the standard deviation ranged from 1.4874 for curiosity to 3.9132 for open-

mindedness. The posttest means ranged from 8.6275 for curiosity to 42.5098 for social-justices, while the standard deviation ranged from 1.0575 for curiosity to as high as 3.5364 for open-mindedness. Please see table 4 for the complete detailed descriptive information.

An overview of the correlation coefficient analyses revealed open-mindedness with the highest reliability coefficient score of .74, $p < .01$; followed by curiosity with .54, $p < .01$; then social-justice with .53, $p < .01$; and self-reflection with .42, $p < .01$. Thus, based on the 14 days repeat test method, the open-mindedness disposition revealed the highest degree of consistency, while the curiosity, social-justice and self-reflection dispositions revealed a fair degree of consistency. The fact that all coefficient scores were significant at the .01 level coupled with the extended duration between the test and retest design indicates a significant reliability of the four disposition domains under study.

It is well established that teacher dispositions or habits, acquired as a result of prior experiences, have a significant influence on school effectiveness and student achievement. Medley & Mitzel, 1958; Flanders, 1970; Rosenshine, 1976; Peters & Amburgey, 1982; Whaley, 1999; and Garmon, 1998; and Garman, 2004. But meeting the dispositional skill needs of pre-service teachers can only be achieved if the construct is approached from a common understanding and from an operational perspective.

Disposition, when viewed from a common vocabulary, should provide educators with a more precise definition while reducing misunderstanding and confusion regarding the construct and its use in effectuating positive impact on student learning. Disposition, when viewed from an operational perspective, should provide educators with accurate specifications of the construct which in turn makes it possible for the construct to be measured with greater precision than we have previously undertaken. Thus, in this study, the question of how best to conceptualize the construct to accomplish disposition enhancement objectives was explored. We designed the DPI with four dispositional domains so as to promote functionality, effective management and accurate specifications of the construct. The instrument is manageable and should allow educators to accomplish dispositional enhancement objectives as set forth by their respective teacher preparation programs. When viewed from a functional perspective and accurately measured, disposition can be effectively taught to pre-service teachers.

Much has been made about the notion that disposition is a construct that leaks out as the individual interacts with others. We do not dispute this notion, except to point out that in this respect the construct is no different from other psycho-metric constructs such as motivation, self-concept, self-esteem, self-ideal, or other personality/character traits for that matter. The prevailing model (third party observer model) of assessing pre-service teachers' disposition has served teacher preparation programs extremely well, especially during practicum and student teaching situations. However, our view is that by assisting them to become expert observers of their own professional behaviors, we can help pre-service teachers acquire the necessary skills of the researcher, and thus are able to self-direct and change their own behaviors toward desired outcomes of their teacher preparation programs. By having students involved in their own evaluations, they learn to manage their professional conducts. This facilitates and enhances students' decision-making skills long after they have left their teacher preparation programs. The self-assessment model is consistent with the constructivist teaching and learning philosophy to the extent that the model is student-centered and views disposition not so much as biological as it is sociological: a social construct in the Vygotsky (1978, 1986) sense.

The four disposition domains we have identified will be further clarified and tested to achieve a greater validity and reliability results. The reification of the construct in this manner should provide a basis for disposition instructional goals for teacher education programs and self-directed change among pre-service teachers.

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Table 1
Cluster Analysis of the Professional Curriculum-Centered Subscale

	Professional/Curriculum-Centered Subscale	OM	SR	CU	SJ
1	I am committed to critical reflection for my professional growth. (P9)	1 4.2%	23 95.8%	0	0
2	I cooperate with colleagues in planning instruction. (P7)	23 95.8%	0	0	1 4.16%
3	I actively seek out professional growth opportunities. (P9)	7 29.2%	7 29.2%	9 37.5%	0
4	I uphold the laws and ethical codes governing the teaching profession. (P9)	0	0	0	23 95.8%
5	I stimulate students' interests. (P1)	7 29.1%	3 12.5%	15 62.5%	0
6	I value both long term and short term planning. (P7)	10 41.6%	12 50.0%	0	0
7	I stay current with the evolving nature of the teaching profession. (P9)	6 25.0%	9 37.5%	7 29.2%	1 4.2%
8	I select material that is relevant for students. (P1)	5 20.8%	7 29.2%	5 20.8%	8 33.3%
9	I am successful in facilitating learning for all students. (P3)	2 8.3%	7 29.2%	0	12 50%
10	I demonstrate and encourage democratic interaction in the classroom and school. (P5)	4 16.7%	1 4.2%	0	19 79.2%
11	I accurately read the non-verbal communication of students. (P6)	4 16.7%	11 45.8%	3 12.5%	4 16.7%
12	I engage in discussions about new ideas in the teaching profession. (P9)	18 75.0%	3 12.5%	4 16.7%	0
13	I select material that is interesting for students. (P1)	8 33.3%	5 20.8%	12 50%	2 8.3%
14	I provide appropriate feedback to encourage students in their development. (P2)	0	8 33.3%	1 4.2%	14 58.3%
15	I engage in research-based teaching practices. (P9)	9 37.5%	4 16.7%	10 41.7%	3 12.5%
16	I create connections to subject matter that are meaningful to students. (P1)	7 29.2%	7 29.2%	8 33.3%	3 12.5%
17	I listen to colleagues' ideas and suggestions to improve instruction. (P7)	18 75.0%	2 8.2%	1 4.2%	1 4.2%
18	I take initiative to promote ethical and responsible professional practice. (P9)	2 8.2%	3 12.5%	0	17 70.8%
19	I communicate effectively with students, parents, and colleagues. (P9)	4 16.7%	11 45.8%	0	8 33.3%
20	I work well with others in implementing a common curriculum. (P7)	11 45.8%	11 45.8%	1 4.2%	1 4.2%

OM= Open-Mindedness, SF= Self-Reflection, CU= Curiosity, SJ= Social Justice

Table 2
Cluster Analysis of the Student-Centered Subscale

	Student-Centered Subscale	OM	SR	CU	SJ
1	I believe a teacher must use a variety of instructional strategies to optimize student learning. (P2)	19 79.2%	3 12.5%	1 4.2%	3 12.5%
2	I understand that students learn in a many different ways. (P3)	12 50.0%	4 16.7%	0	9 37.5%
3	I demonstrate qualities of humor, empathy and warmth with others. (P5)	2 8.3%	12 50.0%	1 4.2%	9 37.5%
4	I am a thoughtful and responsive listener. (P6)	10 41.7%	11 45.8%	0	3 12.5%
5	I assume responsibility when working with others. (P7)	1 4.2%	10 41.7%	1 4.2%	10 41.7%
6	I believe that all students can learn. (P2)	16 66.7%	1 4.2%	0	10 41.7%
7	I believe it is important to involve all students in learning. (P3)	1 4.2%	1 4.2%	0	22 91.7%
8	I believe the classroom environment a teacher creates greatly affects students' learning and development. (P2)	1 4.2%	12 50.0%	4 16.7%	8 33.3%
9	I view teaching as an important profession. (P9)	1 4.2%	18 75.0%	4 16.7%	2 8.3%
10	I understand that teachers' expectations impact student learning. (P3)	5 20.8%	15 62.5%	1 4.2%	2 8.3%
11	I view teaching as a collaborative effort among educators. (P7)	12 50.0%	7 29.2%	4 16.7%	3 12.5%
12	I understand students have certain needs that must be met before learning can take place. (P2)	9 37.5%	6 25.0%	1 4.2%	8 33.3%
13	I am sensitive to student differences. (P3)	10 41.7%	2 8.3%	0	11 45.8%
14	I communicate caring, concern, and a willingness to become involved with others. (P6)	7 29.2%	9 37.5%	3 12.5%	5 20.8%
15	I am punctual and reliable in my attendance. (P9)	1 4.2%	18 75.0%	1 4.2%	4 16.7%
16	I maintain a professional appearance. (P9)	2 8.3%	19 79.2%	1 4.2%	2 8.3%
17	I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence. (P2)	8 33.3%	5 20.8%	3 12.5%	8 33.3%
18	I respect the cultures of all students. (P3)	10 41.7%	0	0	14 58.3%
19	I honor my commitments. (P9)	1 4.2%	19 79.2%	0	4 16.7%
20	I treat students with dignity and respect at all times. (P5)	0	6 25.0%	0	19 79.2%
21	I am willing to receive feedback and assessment of my teaching. (P9)	15 62.5%	11 45.8%	1 4.2%	1 4.2%
22	I am patient when working with students. (P5)	6 25.0%	10 41.7%	0	8 33.3%
23	I am open to adjusting and revising my plans to meet student needs. (P7)	18 75.0%	5 20.8%	2 8.3%	4 16.7%
24	I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others. (P9)	9 37.5%	3 12.5%	1 4.2%	12 50.0%
45	I believe it is important to learn about students and their community. (p7)	9 37.5%	3 12.5%	8 33.3%	8 33.3%

OM= Open-Mindedness, SF= Self-Reflection, CU= Curiosity, SJ= Social Justice

Table 3

Item Categorization and Percentage of Selection by Participants

1. Open-Mindedness

- I cooperate with colleagues in planning instruction. (P7) 95.8%
- I engage in discussions about new ideas in the teaching profession. (P9) 75%
- I listen to colleagues' ideas and suggestions to improve instruction. (P7) 75.0%
- I believe a teacher must use a variety of instructional strategies to optimize student learning. (P2) 79.2%
- I understand that students learn in a many different ways. (P3) 50%
- I believe that all students can learn. (P2) 66.7%
- I view teaching as a collaborative effort among educators. (P7) 50.0%
- I am willing to receive feedback and assessment of my teaching. (P9) 62.5%
- I am open to adjusting and revising my plans to meet student needs. (P7) 75%
- I work well with others in implementing a common curriculum. (P7) 45.8% (rejected)
- I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence. (P2) 33.3% (rejected)
- I believe it is important to learn about student and their community. (P7) 37.5% (rejected)

2. Self-Reflection (SR)

- I am committed to critical reflection for my professional growth. (P9) 95.8%
- I value both long term and short term planning. (P7) 50%
- I demonstrate qualities of humor, empathy and warmth with others. (P5) 50%
- I believe the classroom environment a teacher creates greatly affects students' learning and development. (P2) 50%
- I view teaching as an important profession. (P9) 75%
- I understand that teachers' expectations impact student learning. (P3) 62.5%
- I am punctual and reliable in my attendance. (P9) 75.0%
- I stay current with the evolving nature of the teaching profession. (P9) 37.5% (rejected)
- I accurately read the non-verbal communication of students. (P6) 45.8% (rejected)
- I communicate effectively with students, parents, and colleagues. (P9) 45.8% (rejected)
- I work well with others in implementing a common curriculum. (P7) 45.8% (rejected)
- I assume responsibility when working with others. (P7) 41.7% (rejected)
- I am a thoughtful and responsive listener. (P6) 45% (rejected)
- I assume responsibility when working with others. (P7) 41.7% (rejected)
- I communicate caring, concern, and a willingness to become involved with others. (P6) 37.5% (rejected)
- I am patient when working with students. (P5) 41% (rejected)
- I maintain a professional appearance. (P9) 79.2%
- I honor my commitments. (P9) 79%

3. Curiosity (CU)

- I stimulate students' interests. (P1) 62.5%
- I select material that is interesting for students. (P1) 50%
- I actively seek out professional growth opportunities. (P9) 37.5% (rejected)
- I engage in research-based teaching practices. (P9) 41.7% (rejected)
- I create connections to subject matter that are meaningful to students. (P1) 33.3% (rejected)

4. Social Justice (SJ)

- I uphold the laws and ethical codes governing the teaching profession. (P9) 95.8%
- I am successful in facilitating learning for all students. (P3) 50%
- I demonstrate and encourage democratic interaction in the classroom and school. (P5) 79.2%
- I provide appropriate feedback to encourage students in their development. (P2) 58.3%
- I take initiative to promote ethical and responsible professional practice. (P9) 70.8%
- I believe it is important to involve all students in learning. (P3) 91.7%
- I respect the cultures of all students. (P3) 58.3%

- I treat students with dignity and respect at all times. (P5) 79%
- I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of others. (P9) 50.0%
- I select material that is relevant for students. (P1) 33.3% (rejected)
- I assume responsibility when working with others. (P7) 41.7% (rejected)
- I understand students have certain needs that must be met before learning can take place. (P2) 33.3% (rejected)
- I am sensitive to student differences. (P3) 45.8% (rejected)
- I believe it is my job to create a learning environment that is conducive to the development of students' self-confidence and competence. (P2) 33.3% (rejected)

Table 4
Pretest and Posttest Mean and Standard Deviation
Descriptive Statistics

Domains	Mean	Std. Deviation	N
Open-Mindedness Pretest	40.9216	3.91328	51
Self-Reflection Pretest	41.3922	3.47032	51
Curiosity Pretest	8.2157	1.48746	51
Social Justice Pretest	40.9608	3.46388	51
Open-Mindedness Posttest	41.6667	3.53648	51
Self-Reflection Posttest	42.1961	2.50615	51
Curiosity Posttest	8.6275	1.05756	51
Social Justice Posttest	42.5098	2.41141	51